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ABSTRACT

Educators have become increasingly aware of the complexity of most environmental problems. This realization has resulted in a recognition that scientific and technological solutions in themselves may be a major means for dealing with our environmental problems; but underlying nearly all environmental problems and solutions are human attitudes and behaviors which are a result of our society's ethics and values. Efforts to develop environmental education programs have called attention to the fact that aesthetic awareness and understanding should form the basis by which human beings interpret these ethics and values that influence behavior affecting environmental quality. The purpose of this publication is to provide a philosophic point of view on aesthetics and the environment and to serve as a resource for incorporation of environmental aesthetics learning experiences into any subject. (Author/MA)

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AESTHETICS and ENVIRONMENTAL EDUCATION

A MULTI-DISCIPLINARY RESOURCE for CURRICULUM DEVELOPMENT

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Wisconsin Department of Public Instruction
Barbara Thompson, Ph.D., State Superintendent

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A MULTI-DISCIPLINARY RESOURCE for CURRICULUM DEVELOPMENT

Published By
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Barbara Thompson, Ph.D., State Superintendent

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TABLE OF CONTENTS

- Introduction 1

SECTION I — ENVIRONMENTAL AESTHETICS AND FORCES INFLUENCING IT

- Philosophy, Goals, Rationale 3
- The State of the Environment 5
- Concepts of Aesthetics 6
- Aesthetic Criteria 8
- Integrating Aesthetics into Instructional Programs .. 11
- Ethics and Environmental Aesthetics 13
- Value Definitions 16
- Aesthetic Values and Valuing 17
- Aesthetics and the Natural Environment 19
- The Role of Art, Aesthetics and Design in Assessing Land Quality and Land Use 24
- Urban Environmental Aesthetics 33
- Concepts and Skills 37
- Environmental Aspects of Art Programs 38

SECTION II — HOW TO PUT IT ALL TOGETHER

- Processes Facilitating Aesthetic Awareness and Conceptualization 41
- Preparing for Curriculum Planning 42
- The Conditions for Aesthetic Learning 43
- Psychic Conditions Influencing Environmental Aesthetic Education 44
- Planning for Learning 45
- The Conceptual Learning Process 46
- Conceptual Framework 48

SECTION III

- Bibliography 53

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PREFACE

The growing public awareness and concern related to the deterioration of our environment has resulted in a need for and demand that education at all levels deal with this problem as part of the educational process. For several years the Wisconsin Department of Public Instruction has recognized this need and has assumed a leadership role in developing and providing environmental education guidance and resources.

Educators have become increasingly aware of the complexity of most environmental problems. This realization has resulted in a recognition that scientific and technological solutions in themselves may be a major means for dealing with our environmental problems but underlying nearly all environmental problems and solutions are human attitudes and behaviors which are a result of our society's ethics and values. Efforts to develop environmental education programs have called attention to the fact that aesthetic awareness and understanding should form the basis by which human beings interpret these ethics and values that influence behavior affecting environmental quality. Responding to this need, the Wisconsin Department of Public Instruction originated and produced this guide.

The purpose of this publication is to provide a philosophic point of view on aesthetics and the environment and to serve as a resource for incorporation of environmental aesthetics learning experiences into any subject.

Barbara Thompson

State Superintendent
Wisconsin Department of Public Instruction

Introduction

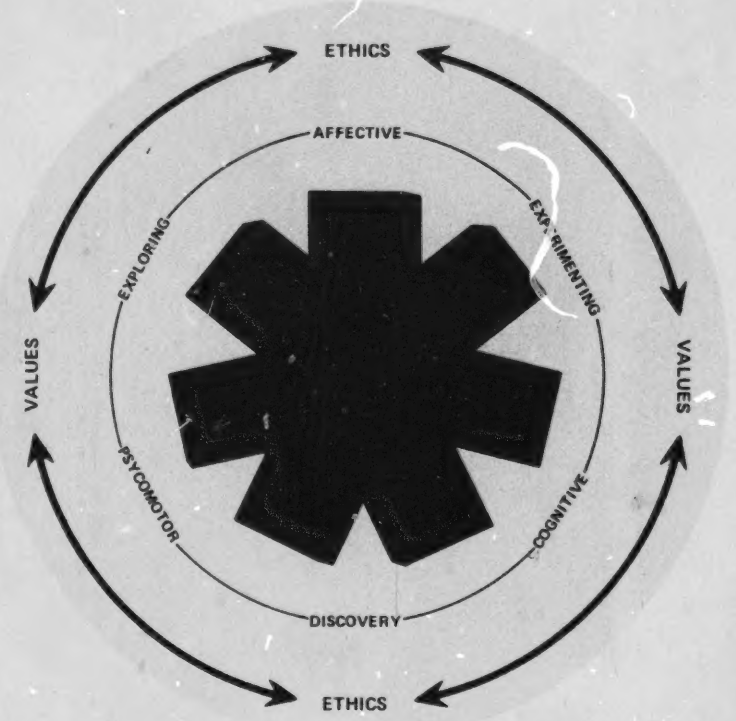
The accompanying schema depicts all of the major factors that the Environmental Aesthetics Curriculum authors consider to be necessary for meaningful learning experiences related to aesthetics and the environment. It is not a model for curriculum development but rather a holistic and hierarchical organization of those factors which should be incorporated in an environmental aesthetics curriculum and the related processes of learning.

This schema depicts ethics as being the most dominant and pervasive force affecting society's and each individual's values. Values are the screens and determinants affecting all of the other elements in the above schema. Environmental aesthetic education processes should involve the affective, cognitive and psychomotor domains with an emphasis upon sensory experiences stressing exploration and discovery.

The schematic design attempts to convey a feeling of interaction, interrelatedness and dynamics between all of the elements it identifies. It is the position of this book that education related to environmental quality cannot be dealt with effectively in a fragmented and linear manner, but that all of the elements in the schema must be considered when organizing learning experiences.

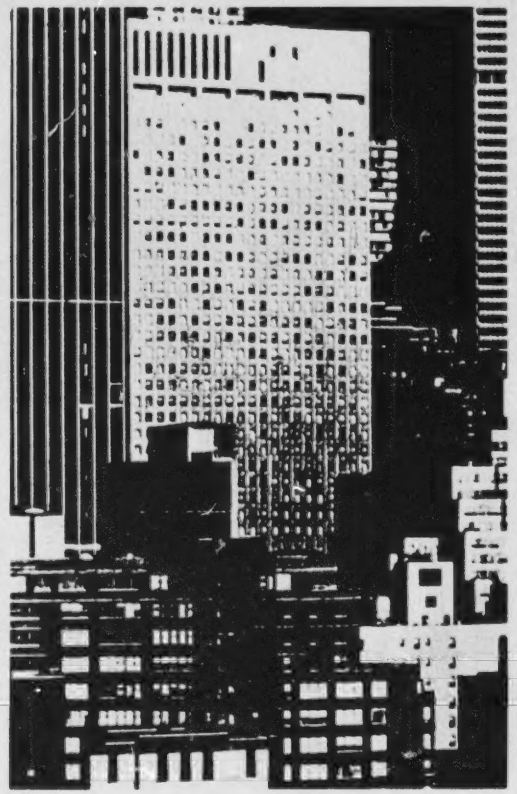
The statements that follow elaborate the philosophical foundations of the schema. The first section deals with the rationale for environmental aesthetics and the related curriculum content. The second section describes the procedures and processes for curriculum development and implementation. The third section provides bibliographical references and supplementary resources.

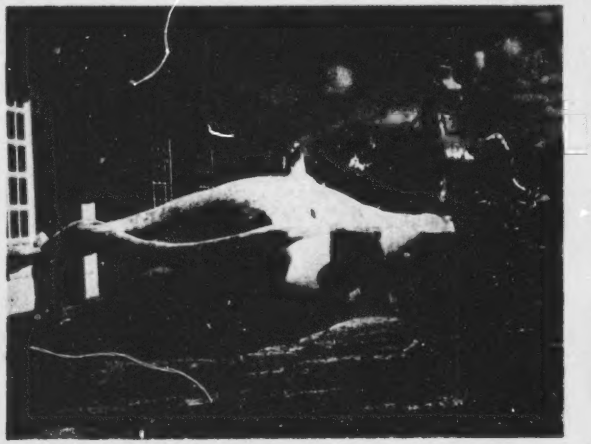
The purpose of this publication is to serve as a multi-disciplinary environmental aesthetics resource for curriculum development.

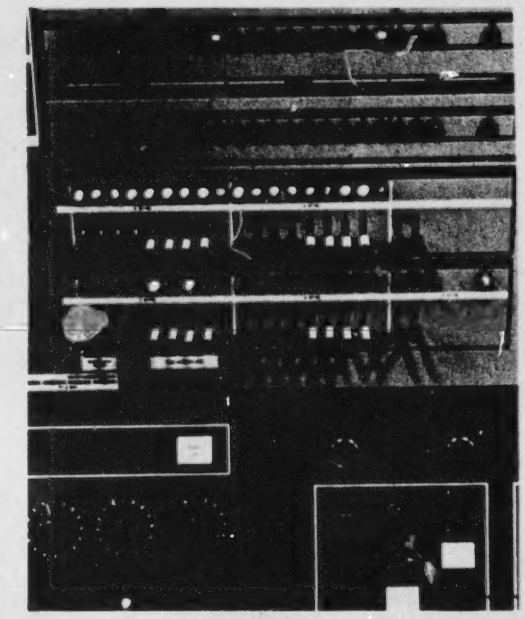


SECTION I

ENVIRONMENTAL AESTHETICS AND THE FORCES INFLUENCING IT





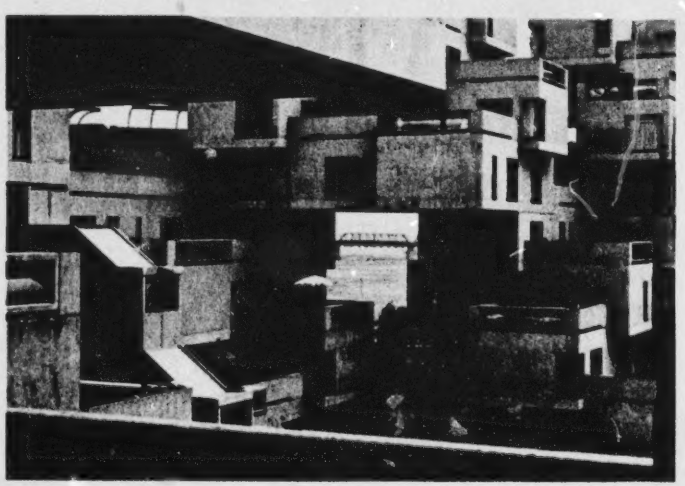


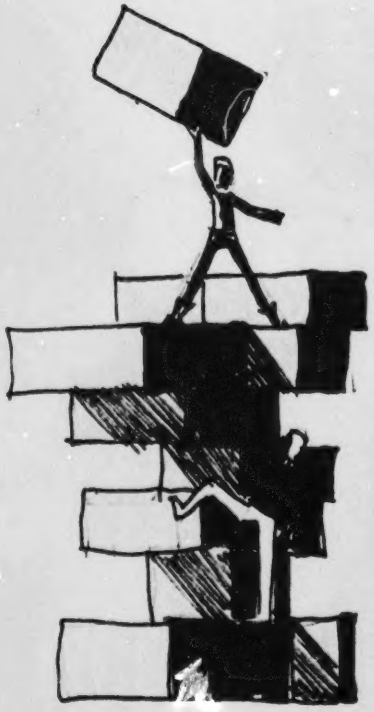
Environmental Aesthetic Education: Philosophy, Goals, Rationale

It is now apparent that the task of education for environmental awareness has at its center a crisis of values. The past insensitivities and misuses of environment are not merely or even primarily failures of scientific knowledge or technology. They are failures in aesthetic and ethical sensitivity. Aesthetic and ethical values are pervasive qualities affecting all human environmental decisions and actions. Aesthetic awareness requires sensitivity to form and design through the exercise of perceptual discrimination. Ethics makes us aware that all persons, present and future, are entitled to equal respect and to a share of the benefits of the natural and man-made environment. Ethics calls attention to the fact that nature's processes and life support systems are entitled to respect and careful use. Both aesthetic and ethical values are thus central for the achievement of a total quality of life. They give purpose and direction to the ecological knowledge and skills that are necessary to solve environmental problems.

Awareness of aesthetic and ethical aspects of responses to the environment naturally begins in the home and in familiar play and work surroundings as the child interacts with his personal environment. Public or alternative schools are in a position to formally integrate and communicate awareness of aesthetic and ethical aspects of environment with other related concepts and knowledge. Schools have the formal means for teaching ordered concepts, and they occupy major portions of prime learning time in children's lives. It is therefore incumbent upon educators to provide models of environmental learning that will educate people toward capability in aesthetic and ethical decision making.

The aims of the publication are to provide a position statement and reference for curriculum development and to identify resources for its implementation in the schools. The publication is designed to stimulate awareness of the aesthetic





and ethical base for a holistic interdisciplinary approach to environmental education, in which aesthetic and ethical values are correlated with ecological approaches and applied to environmental problems.

A well-developed program for environmental education that incorporates the aesthetic and ethical factors can be achieved through implementing the following goals.

1. To integrate aesthetic and ethical beliefs and attitudes in relation to the development of ecological concepts and skills in both informal and formal learning experiences. This task can be accomplished by relating arts and value education to other subject areas such as the ecologically oriented natural sciences, history and literature.

2. To foster a sense of inquiry into environmental planning and the solution of problems through arts projects that relate perceptual discrimination and design in art to the larger environment.

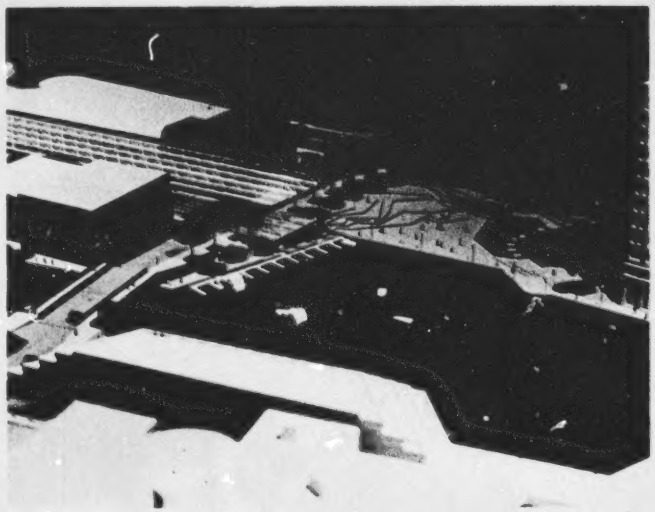
3. To teach respect for the total environment including persons, natural elements, and man-made structures, and develop an awareness of their intrinsic worth.

4. To design a series of learning experiences, for the public and alternative schools over a K-12 continuum that will orient attitudes, concepts, and skills positively toward:

   A. Providing a holistic approach to environmental educational concepts.

   B. Introducing aesthetic and ethical factors into environmental learning processes.

   C. Developing experiences of perceptual discrimination and awareness of its impact upon human growth.



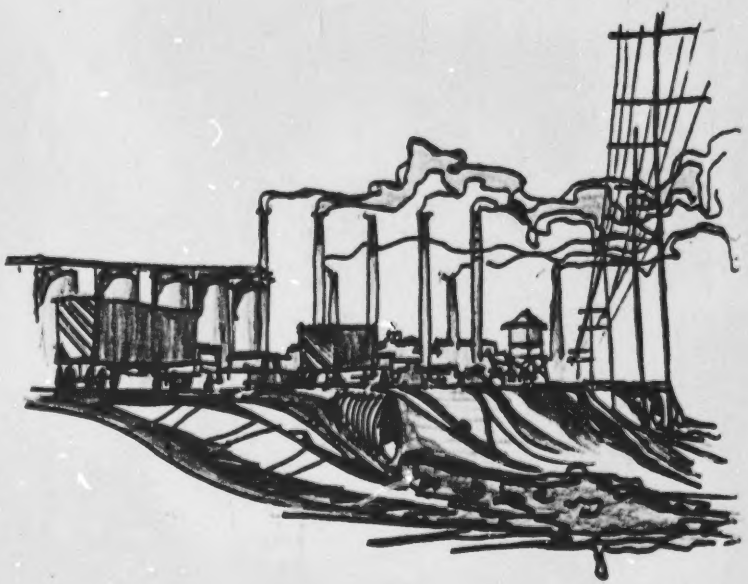
Aesthetics: The State of the Environment

Is ours a society that stresses technological information processing at the expense of a positive/active appreciation of, and response to, the aesthetic qualities of natural and man-made phenomenon? Is the radiance of the sunset to be obliterated by the ozone haze and smog from automobile exhausts, by the glare of neon signs, the tangle of telephone poles and wires, and the sky-filling, view-limiting, "non-radiance" of ugly city structures designed to serve economic interests with a disregard of other human needs?

If it is within the capability of man to destroy an environment, it is also within his capability to renew and rebuild it. The problem is not one of capability, but rather a problem of attitude and focus. The missing key to widespread human attitudinal commitment for a humane environment is found in the term "aesthetic" whose varied meanings suggest to some a mysterious, ambiguous realm that is far removed from the American values of objectivity and action.

Aesthetics represents the missing component in man's impact on his environment; consequently, the environment has changed rapidly from one of natural beauty to one of alienation and anomie. While changes in the land over a period of time are inevitable, the effects of man can be guided by an awareness of the power of good design, the human capability of visual valuing, and a sense of order. Man, as well as nature, can create beautiful surroundings.

How have we managed — in less than 200 years of American civilization — to destroy a natural environment developed over many thousands of years and replace it with a concrete, metal and plastic setting that too often facilitates commerce at the expense of the rights of the individual to perceive and receive a life quality enhanced by pleasurable environmental ambiance?



11

Concepts of Aesthetics

There is presently a need to move our society towards an aesthetically oriented value structure that is capable of providing positive goals and guidelines for the development of a quality environment. A first step toward this goal is to clarify and define the term aesthetic and to show its relevance to present environmental problems. It is difficult to separate definitions of aesthetics from definitions of art because of the integral interrelationships of these two spheres of influence.

Perhaps the ineffectiveness of aesthetic decision-making processes can be traced to western man's low priority for activities rooted in such words as "appreciation," "creation," and "art." The activities that we associate with these words did not significantly affect developments occurring during the westward movement of civilization, as an examination of the deeds and structures of either America's pioneer explorers, industrialists, or builders will show. The cities, building structures, and other environmental effects of these early form-givers of our society provide easily discernible visual evidence of a lack of concern for the human dimensions and the needs of life. The absence of significant impact of aesthetic influence in the shaping of our major cities no doubt helps to explain their present relative aesthetic poverty.

This rejection of a major role for aesthetics in decisions relating to changes in our environment as it evolved from natural to man-made is closely related to the fact that in the past few persons other than artists and philosophers have deliberated about aesthetics and its relationship to existence. The great body of writing on aesthetics is expressed in philosophic terms rather than in pragmatic, action-oriented terms. And the philosophers who have persisted in championing the importance of aesthetic values have not always been successful in influencing the decision makers of our culture. Yet their statements of the meanings we give to the term aesthetics can be helpful in our current efforts to relate aesthetic value to our understanding of the environment.

Early considerations of aesthetics were often closely related to the term beauty. The Greeks of the classical age developed an ideal of beauty that combines organic or natural forms and mathematical rules representing true proportions. Greek architecture and art draws its beauty from these natural-mathematieal forms and relates spiritual values to physical forms. The Greek aesthetic ideal was meant to influence all aspects of their life.

Immanuel Kant, an eighteenth century philosopher, sought to find a distinctive category of "aesthetic knowledge", to separate it from "scientific knowledge." Perceptual discrimination acting as a stimulus to imagination gives us this special aesthetic sense that according to Kant, leads to the experiences of beauty and the sublime.

The more sensory-oriented aspects of aesthetics influence the formation of attitudes in human beings, because the senses acting together with cognitive processes produce the decisions that we act upon. Aesthetic awareness or knowledge is based in all of the senses, and it is these senses that seem atrophied when man wilfully accepts the destruction of his environment. The senses provide input that influences the necessary positive changes in attitudes to bring about renewal of our tarnished environment. Only when man develops a personal aesthetic consciousness will he become aware of his destructive habits and become committed to positive rather than negative behavior.

Despite a growing body of evidence indicating a significant need for aesthetic concern in a variety of human behaviors, awareness by the general public fails to reflect to any degree, regard for aesthetically-based decisions

The role of aesthetic perception in shaping attitudes and behaviors is well stated by Sir Herbert Read who suggested that "the human mind receives, shapes and interprets the

More recent aesthetic viewpoints include those of Phenix, who describes aesthetics as "a realm of meaning," a category of experience that gives meaning to life processes.[1] Prall views "sensory apprehension" of aesthetic surfaces as the basis for aesthetic experience.[2]

1. Phenix, 1964
2. Prall

13

images of the outer world with all its conscious and subconscious powers, and the realm of the unconscious could never enter our experience without the reflection of perceivable things."

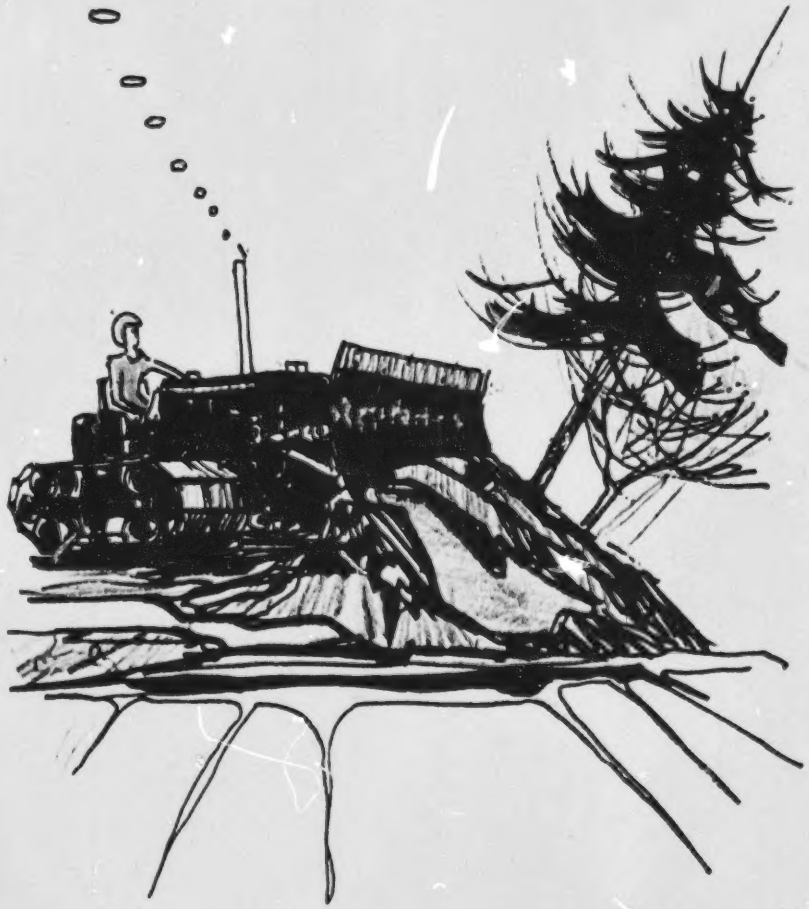
Aesthetic Criteria

One of the possible reasons for the disregard of aesthetic factors in decision-making that determines the shape and quality of the environment has been the belief that aesthetic judgments are subjective or arbitrary. The lack of agreement on exactly what constitutes aesthetic factors or norms has led others to regard aesthetics as being too ambiguous for incorporation into objective decision-making processes. We have come to realize that aesthetics is an open concept subject to modification as interests change and new developments emerge, rather than a closed concept with necessary fixed properties for all times. Any attempt to formulate aesthetic criteria that can be incorporated into an environmental aesthetics education curriculum should be mindful of the open character of aesthetic properties and should be wary of rigidly imposing any one set of norms. It must be noted, however, that there are certain factors that appear repeatedly in the lists of characteristics that philosophers and others assign to the term aesthetics. A comprehensive list of *aesthetic factors* found in objects that we call "aesthetic" therefore, may include the following:

- Sensuous materials
- Formal design
- Sensory qualities
- Expressive qualities
- Formal qualities
- Symbolic meaning

Harry Broudy describes an aesthetic experience as "a special way of perceiving objects, events, or situations, the subject of the appreciator contributes sense organs, a nervous system, a past experience, and a set of readiness."[3]

3. Broudy, 1972



and at the same time, we find included in the characteristics of "*aesthetic experiences*" the following:

- Perceptual discrimination
- Active-receptive response
- Intuitive
- Immediate
- Qualitative
- Pleasureable
- Intrinsically gratifying
- Awareness of sensory richness
- Awareness of form
- Awareness of expressive properties
- Awareness of regional qualities
- Awareness of tertiary qualities
- Awareness of variety
- Awareness of unity
- Awareness of symbolic meaning

These characteristics of aesthetic objects and of aesthetic experiences can be applied to man-made and natural environments as well as to works of art. Given the wide diversity of "objects" and "experiences" that fall under our terms "aesthetic object" and "aesthetic experience" we can anticipate that particular aesthetic objects will not always include all of the factors that we have listed. And, since the list is not exhaustive, there may well be other factors that we will want to call "aesthetic," and the same is true for aesthetic experiences. Moreover, the character of aesthetic experiences relating to man-made or natural environments may vary somewhat from those appropriate to the arts.

Nevertheless we can expect that the criteria that we apply when we seek to measure or evaluate the aesthetic import of a natural or man-made environment will resemble those criteria that we find applicable to the arts. Philosophers have proposed their own solutions to the problem of aesthetic criteria. Broudy develops a set of ground rules based on his own list of aesthetic factors. Here we are proposing a list of general aesthetic criteria and also some particular criteria for environmental aesthetics. The list is necessarily tentative and suggestive rather than definitive, for it is not possible to give a definitive statement on aesthetic criteria at this time. We believe that the list, however tentative, will be useful as a point of reference in formulating environmental aesthetic curriculum.

General Aesthetic Criteria

- Richness and variety in sensuous materials
- Adherence to principles of design
- Unity of elements in relation to the whole
- Pleasure producing
- Resulting in meaningful, perceptual, affective, intuitive, and cognitive experiences
- Exhibition of creativity and imagination
- Exhibition of technical excellence in a medium

- Contribution to the quality of life
- Articulation of significant values in sensuous form.

Environmental Aesthetic Criteria

- Optimization of the quality of man's relation with his environment
- Suitability of the man-made structure (architecture, etc.) for its use
- Adaptability of man-made structures to their present and future environments
- Adaptability of the man-made structures to changing human needs
- Effectiveness in the use of space
- Rhythmic, harmonious ordering of the sequences of environmental space
- Appropriateness of color and texture to the environment
- Compatibility of man-made structures with the character of the natural environment
- Attractiveness of the natural landscape
- Effective disclosure of natural patterns and their beauties

The identification and application of aesthetic criteria provides guidelines for making aesthetic judgments. The exercise of aesthetic judgment based upon perceptual discrimination is crucial to the understanding and production of a humane environment, because disregard for aesthetic con-

siderations has been a major factor in producing the present sordid aspects of our environment. A major goal of aesthetic environmental education is thus to raise the level of aesthetic consciousness so that the general populace can exercise aesthetic judgment and make choices that distinguish the significant from the shoddy.

Integrating Aesthetic Learning Into School Instructional Programs

If aesthetics is to become central to the reconstruction of the American environment, the relationship between aesthetics and education needs to be critically examined. Solutions can be formulated in the educational process where learning is a means to change individual attitudes through interaction with environment. A principal aim of aesthetic environmental education is to make the individual more capable of dealing adequately with that environment.

The building of aesthetic competencies is a primary objective for school programs because the attainment of such competencies will increase the individual's sensitivity to the special significance of both man-made and natural phenomena. Aesthetic experiences do occur in all curricular areas, but arts programs are directly concerned with images of color, shapes, sounds, and movement that the senses respond to. The primary purpose of art, music, dance, theater, film, and the literary arts programs in the school is to facilitate aesthetic understanding that allow for development of the student's ability to experience the world as it is given and received through the senses. Such programs provide the nucleus for an approach to environmental aesthetic education curriculum, and make the student sensitive to aesthetic aspects of other subject areas.

Aesthetic education can teach students that the natural environment is rich in aesthetic value potential, although knowledge from other disciplines will often be required to realize it fully.

Summary

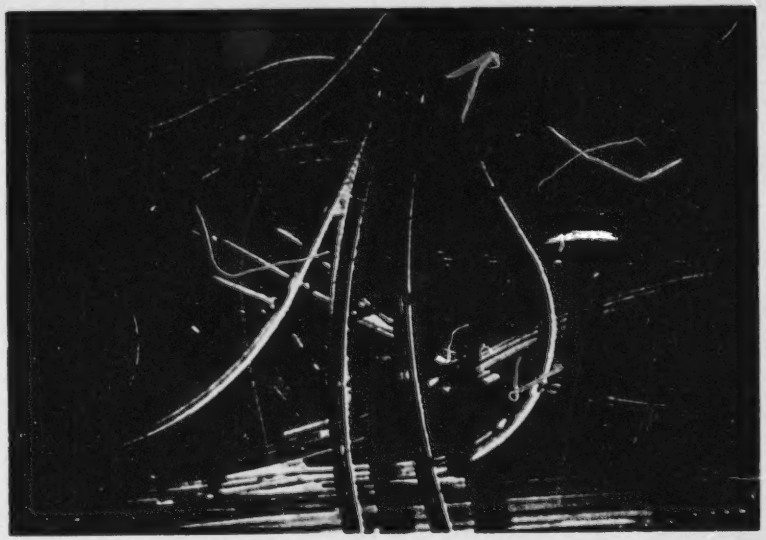
A major task of the schools should be to educate individuals toward capability in aesthetic decision-making, building sensitivity to environmetal concerns and generating positive behaviors in support of an aesthetically fulfilling environment.

Educators have a responsibility to assume leadership in areas of environmental and aesthetic sensitivity. The child involved in an aesthetic process structures the response to the environment by converting ideas and feelings into an organized, selected, and shaped physical image or form. Through involvement in making and in contemplating works of art, the student develops self understanding and understanding of the world. At an early age, children should be encouraged to observe their personal environment, to make perceptually discriminating value judgments relevant to the aesthetic aspects of their surroundings, and to consider means for conserving our natural environment and improving the man-made environment.

Arts, the principal aesthetic component of education, embraces changes in behavior that can be traced to the influence of the environment as transmitted through the sensory organs. The senses are essential to the area of aesthetic experience. Education of the senses provides a foundation for developing the student's ability to become aware of aesthetic satisfactions. These satisfactions are essential to a fully-functioning individual. Contacts with the environment — perceiving, valuing, creating — enhance the individual's abilities to experience the forms, colors, sounds and movement patterns that comprise the surfaces of the visible world. Each act of perceiving includes aesthetic valuing and results in a discriminating way of looking.

Any program of aesthetic education might reasonably be expected to include units on appreciation of architectural design.

Where the urban scene is concerned, perhaps all that is required is to make students aware of what they shouldn't have to tolerate.



Encouraging the attainment of aesthetic capabilities in the learner at all levels of education will help to transform the aesthetically unaware citizenry into advocates of an aesthetically fulfilling environment. The development of a sensitivity to aesthetic values is a lifetime pursuit, and an aesthetically-oriented citizenry is the mutual responsibility of the total society.

Ethics and Environmental Aesthetics

The importance of ethics to environmental aesthetics and to one's attitude toward the natural environment can be shown by contrasting two major ethical systems. These systems can be categorized in relation to the non-technological and the technological world views. The non-technological world view is exemplified in the native Western cultures and in Eastern cultures. The technological world view had its roots in the early Greek civilization and can be exemplified by most Western cultures.

Persons governed by the non-technological world view were able to relate to their natural environment. They showed sensitivity to the unity among all creatures and treated them according to an ethical and aesthetic consciousness. In the man-made environment of the non-technological cultures, people related aesthetically to their natural environment because natural materials which unified both aspects of the environment were used.

The technological world, through science, enabled human beings to grasp universal laws and essences in nature; these laws permitted human beings to predict and invent tools to help them in the exploitation and conquest of nature. This stress upon the logical and predictable, emphasized conceptual consciousness and suppressed aesthetic consciousness except where economic wealth or political power provided a means for aesthetic concern for the man-made environment.

Ethics
Ethics is the base from which value priorities and principles governing right action are determined.

19

Both the non-technological and the technological ethical systems have proved inadequate as an acceptable ethical base for environmental aesthetics.

In the non-technological culture, one's reverent attitude toward nature is often replaced by exploitation that evolves from economic pressure. In the technological system, people's "industrial mechanical" attitude toward nature has hindered them from reacting to their environment through their senses and limited their concern for an environmental aesthetic.

A new ethic must be developed that will borrow from the Eastern and native Western philosophies resulting in: 1) A new cosmic being, a citizen not just of America, or of earth — but of the universe. 2) A desire to seek a better knowledge of one's relationship to earth, to other human beings and to oneself. 3) Creating a new set of values and a new system of ethics whereby one guides one's choices by principles beyond one's own self-interest. 4) A vision of the unity and interdependence of all nature where each person's work contributes to the greater realized perfection of the universe, where one becomes a member of a community of interdependent parts of the land. 5) A new environmentalism which would be centered on human beings in their ever expanding consciousness of the unity that binds all of creation together.

In order to get at a new ethical base we may draw upon both Eastern mystical perspective and native American perspective, incorporating them with our judaeo-Christian tradition, subsequently we need to realign our attitudes along the following more ecologically and aesthetically sound approaches to the environment:

- Recognizing the wholeness of creation and its aesthetic value.
- Becoming aware of natural processes and their interdependence.

20

- Developing a stewardship or participation. (Analytical appreciation and creative involvement)
- Developing the concept of brotherhood of the land and aesthetic concern to eliminate exploitation.
- Fostering institutional redirection toward environmental and aesthetic concern.
- Becoming quality sensitive rather than quantity oriented.

An important goal of education is to encourage students to consider environmental problems, their causes and results and to arrive at new solutions using values they develop for a new ethics of environment in which aesthetic values are considered.

Several ethical choices are available today, as they have been in the past:

Egoism (personal or social) acts on the assumption that immediate gratification of personal or select group interests without regard for the interests of others is the acceptable norm of behavior. The underlying principle is self-interest, individual or collective.

Short Term Ethical Universalism assumes that all people alive today are entitled to equal respect and benefits and that the environment is to be used to achieve a quality of life for the persons of today without taking account of future consequences.

Long-Range Universalism assumes that all persons present and future are entitled to equal respect and a share of the benefits of environment, and that nature's processes and life support systems are entitled to careful respect and use for the

21

achievement of a total quality of life. Not all of these are compatible with the immediate and long-range possibilities for achieving a hgh quality of life.

Only the third alternative seems adequate for an environmental ethic. That is compatible with immediate and long-range possibilities for achieving a higher quality of life. Acceptance of long-range ethical universalism will require reorientation of individual and societal attitudes and actions. This third alternative is compatible with both Western and Eastern value orientations which acknowledge respect for persons and for creation. It is incompatible with value orientations which regard persons and natural resources solely as means to be exploited for immediate gratification in its various forms.

The nature of ethics is central to the approach to environmental problems, including the aesthetics of environment, because ethics includes:

1. Articulation of values (one of which is aesthetic value) that pertains to the intrinsic worth or good of human beings and the natural environment,

2. Establishment of priorities among relative values which would determine the weight given to aesthetic value in relation to other values,

3. Determination of fundamental principles of right actions relative to personal decisions and actions, and to societal-institutional decisions and actions with respect to:

   - Relationships among persons, among persons and institutions, and

   - Uses and distribution of natural and artifactual resources, thus allowing for aesthetic considerations in the decisions relating to environment.

Value Definitions

There is a general lack of agreement regarding the meaning and nature of values and valuing. The one thing that is agreed upon is that a value represents something important in human existence. The following description of values and valuing is based upon several sources of opinion and reflects generally accepted characteristics of the nature of values.

A prospective value is anything which persons approve, desire, affirm or exert themselves to obtain, preserve or assist. Some universal things that people value are power, wealth, enlightenment, skill, rectitude, respect, and affection. Values are intangibles. They are things of the mind that have to do with ethics and morals, and with human well-being. Abstract in nature, values manifest themselves overtly in attitudes, beliefs and human behavior. They relate to rationalization of behavior. When behavior is not in harmony with values, value conflicts arise.

When conditions in the environment are such that ethics and morals that were once appropriate and accepted are no longer effective, people often become confused and a revaluation of accepted standards occurs. The possession of diverse values sets people apart, while their holding similar values helps to bring them together.

Knowing and understanding one's own values through value clarification is an important part of the learning process in order that one better realizes what things are meaningful to a person, what one is striving toward and what sort of world one wants to see come into being.

The process of valuing involves all of the following elements: choosing freely, choosing from alternatives, choosing after thoughtful consideration of the consequences, prizing and cherishing, affirming, acting upon choices, repeating the chosen act.[4]

4. Raths, Harmin & Simon, 1973.

The most important or major values in one's life are ideals. They are the basis of vision and aspiration. All significant human achievement is the product of insight through an ideal.

Aesthetic Values and Valuing and the Environment

Environmental quality is primarily affected by man's actions which are a result of Western societies valuing and pursuing the logical, predictable and controllable. These activities emphasize and are based upon mathematics, science and technology in shaping the environment. There has long been a suspicion of the affective or aesthetic domain. This imbalance has resulted in a lack of aesthetic valuing which has allowed the development of a natural and man-made environment which is becoming increasingly devoid of aesthetic quality. This lack of applied aesthetic values has in turn largely caused an environmental crisis which threatens to destroy the life support systems of the planet.

These conditions make it essential that the educational process provide balanced experiences which foster values related to aesthetic awareness, beliefs, and attitudes. To do otherwise will mean that mankind will continue to pursue insensitive practices which are generally detrimental to the intrinsic aesthetic qualities of the environment, and there will be a continual erosion of the qualities that fulfill human beings and bring meaning to life. The importance of this need which is frequently ignored or denied was regarded as the essence of life by Friederich Nietzsche who said, "Only as an aesthetic phenomenon may existence in the world appear to be justified."

It is critical that persons examine and clarify the value conflicts arising from intrinsic, inherent aesthetic needs and extrinsic, imposed material needs. This understanding and

23

developing of values related to the aesthetic phenomenon is essential if a balance is to be developed between the functioning of the natural environment on the one hand and human technological needs for development on the other. Due to the rapid changes in our society which have destroyed or made obsolete many of our traditional ethics, morals and other values, public schooling has been steadily moving away from education that involves affective experiences or which deals with controversial issues. As Raths, Harmin and Simon have stated:

> **Teachers turned toward "teaching the facts". If controversy was to be troublesome, one should stay away from it. Administrators tended to prefer teachers who did not raise issues. In communities of strangers living together, people who did not know one another well, people with different backgrounds, it became easier to have schools which themselves represented an absence of consensus. Moral, ethical, aesthetic values were quietly abandoned as integral parts of the curriculum.**[5]

This disproportionate emphasis upon the non-controversial, objective and predictable has resulted in the education of a society which values practices destructive to the aesthetic quality of the environment. The educational process should provide learning experiences which not only allow for the examination of values related to aesthetics but it should also provide aesthetic learning experiences which will foster the valuing of aesthetic conditions. Values are of a personal nature and in a pluralistic, free, democratic society each person must be allowed to pursue personally held values if they are not self destructive, socially or environmentally damaging. Hopefully many of the values held by all members of our society will lead to a higher quality of existence and not merely be based upon whether or not they are damaging. The need for self-actualizing and humanizing educational experiences requires that schooling be more than talking about those values; rather schooling should provide a total learning environment which exemplifies these ideals. Whether it is planned or not, the school organization and administrators and teachers will shape the values of the learner. It is therefore essential that school practices and the attitudes of educators be examined to assure that positive values related to aesthetics may be meaningfully ingendered throughout the total learning process. Students should have opportunities to examine aesthetic conditions in and outside of school in order that they might question and understand not only aesthetic values but also the related ethics and other values generally held by our society. All of these values, aesthetic, ethical, and others, working together determine the aesthetic quality of the natural, man-made environments and life itself.

5. Raths, Harmin & Simon, 1973.

The process of valuing is as important as the resulting values, for it is important that students develop an open and flexible attitude which will permit them to cope effectively in a complex and rapidly changing world. The process of value clarification should involve all of the senses acting in relation to both verbal and non-verbal modes of perceiving and responding. Rather than to regard education as a means to indoctrinate students with a fixed set of aesthetic norms, ethics, and values, it is more important to help them find some meaning and make some order out of their changing worlds.

Aesthetics and the Natural Environment

The native American knew and understood man's intended place in nature. He lived within nature rather than apart from it and realized that man apart from nature was akin to man apart from man. The ancient Greeks likewise revered nature and man's place in it. They worshipped gods who were themselves aspects of nature, gods more at home in woods, streams, and mountains than in the temples built for them. They recognized that nature was the source of health, beauty, and joy, and that living in accord with natural laws was wisdom. The Great God Pan, the nature god, was among the most powerful of deities.

Even today, there are cultures believing as did the Native American and ancient Greeks. Eastern man perceives nature as a possible ally to be identified with, understood, joined, sought for and lived with in harmonious collaboration. But

Western man behaves as if nature is an opponent to be conquered, controlled, or formed and changed to provide him with services, An understanding of simple ecological principles might help refute this view and help Western man to understand his place in nature. Understanding of ecological principles coupled with aesthetic awareness, discrimination and knowledge can bring about the balance between Eastern and Western philosophies affecting environmental quality.

What man has failed to realize, or if he does realize ignores, is that the earth became suitable for his kind of organism only after countless other organisms had prepared it for him, and that it remains suitable only because many of these same organisms maintain it in a suitable state. Rene Dubos, writing in *A God Within*, about the earth as man's home says:

> **The sensuous qualities of its blue atmosphere and green mantle are not inherent in its physical nature; they are creations of countless microbes, plants, and animals that it has nurtured and that have transformed its drab inanimate matter into colorful living substance. Man can exist, function, enjoy the universe, and dream dreams only because the various forms of life have created and continue to maintain the very special environmental conditions that set the earth apart from other planets and generate its fitness for life — for life in general and for human life in particular.**[6]

But man is slowly beginning to recognize the invalidity of his assumed right of control and the danger of many of his actions. In *Wilderness and Plenty*, F. Fraser Darling speaks of man's responsibility to the environment:

> **The exclusion of man from the hierarchy of nature, so common in the past and even in our own time, is to put him in the position of bourgeois rentier, living off an economy but having no responsibility for it. To make him an integrated functional member of the planet and animal world about us is no denigration of this high estate, no assumption of a mealy-mouthed egalitarian folksiness. Rather does man accept his position in nature as the species granted the privilege of fulfilling the aristocratic ideal of noblesse oblige, of being the servant of his people.**
>
> **This is our responsibility toward earth and its denizens.**[7]

6. Dubos, 1972.
7. Darling, 1970.

"When I was ten years of age I looked at the land and the rivers, the sky and the animals around me and could not fail to realize that they were made by some great power. I was so anxious to understand this power that I questioned the trees and bushes. It seemed as though the flowers were staring at me, and I wanted to ask them "Who made you?" I looked at the moss-covered stones; some of them seemed to have the features of a man, but they could not answer me. Then I had a dream, and in my dream one of these small round stones appeared to me and told me that the maker of all was Wakan Tanka*, and that in order to honor him I must honor his works in nature."

— Tantanka-Ohitika[8]
(Brave Buffalo)

*Wakan — mysterious, Tanka — great

"Our land is more valuable than your money. It will last forever. It will not even perish by the flames of fire. As long as the sun shines and the waters flow, this land will be here to give life to men and animals. We cannot sell the lives of men and animals; therefore, we cannot sell this land. It was put here for us by the Great Spirit and we cannot sell it because it does not belong to us. You can count your money and burn it within the nod of a buffalo's head but only the Great Spirit can count the grains of sand and blades of grass of these plains. As a present to you, we will give you anything we have that you can take with you; but the land, never."

— A Blackfeet Chief[9]

"The old Lakota was wise. He knew that man's heart away from nature becomes hard; he knew that lack of respect for growing, living things soon led to lack of respect for humans too. So he kept his youth close to its softening influence."

— Chief Luther Standing Bear[10]
1868

8. As quoted in McLuhan, 1972.
9. Ibid.
10. Ibid.

Learning experiences related to the natural environment can only be fully meaningful when the student has the opportunity of sensing the mystery, beauty and life fulfilling qualities of nature. The basic need of human beings to experience the aesthetic qualities found in nature were expressed by Henry Beston in *The Outermost House:*

Nature is part of our humanity, and without some awareness and experience of that divine mystery man ceases to be man. When the Pleiades, and the wind in the grass, are no longer part of the human spirit, a part of very flesh and bone, man becomes, as it were, a kind of cosmic outlaw, having neither the completeness and integrity of the animal nor the birthright of a true humanity.[11]

Man slowly seems to be realizing that he is a part of nature, and perhaps equally important, that nature is a part of man. Stainbrook comments on this latter point in a paper, "Human Needs and The Natural Environment":

We must recall that some of our most basic metaphors and phrases that define our real feeling about nature are "Mother Nature" and "Mother Earth." Every time you lie on a sun drenched beach and enjoy simply the tranquility and ease of that moment, you are regressively enjoying a very basic human gratification. There are those persons who wonder whether children born in the ghetto and therefore quite out of the natural environment, have that same kind of regressive longing and need for nature. The return and longing to return to "Mother Nature" is a symbolic yearning but it is present in all of us.[12]

Concurrent with the growing recognition that man is a part of nature, and that nature is a part of man, there is a call for a new ethic regarding the relationship of man and nature. Embodied in this proposed ethic is an aesthetic element of considerable importance. Aldo Leopold has been a primary spokesman for those who demand this new ethic and his *Sand Country Almanac* has become its "Bible." Leopold's words clearly define his position:

11. Beston, 1962.
12. Stainbrook, 1968.

"Man is an organization of the infinite smallness of nature thrust up into the infinite bigness of the universe. Man is, moreover, that part of nature which has become self-aware and capable of learning and of self-study and self-direction . . . apart from too infrequent moments of self-reflection, modern man seems to be determined to seek his own elimination as natural man and to ignore, disguise, transform, and frequently to despoil concernedly the naturalness of the earthly space in which he lives."[13]

13. Stainbrook, 1968.

"The Great Spirit, in placing men on earth, desired them to take good care of the ground and to do each other no harm . . ."

— Young Chief[14]

14. As quoted in McLuhan, 1972.

27

That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics. That land yields a cultural harvest is a fact long known, but latterly often forgotten.
All ethics so far rest upon a single premise: that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in the community, but his ethics prompt him also to cooperate (perhaps in order that there may be a place to compete for.)

The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.

In short, a land ethic changes the role of homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.[15]

Throughout his discussion of the new ethic Leopold frequently points out the aesthetic qualities of natural environments.

For us of the minority, the opportunity to see geese is more important than television, and the chance to find a pasque flower is a right as inalienable as free speech.

and

Our ability to perceive quality in nature begins, as in art, with the pretty. It expands through successive stages of the beautiful to values as yet uncaptured by language.

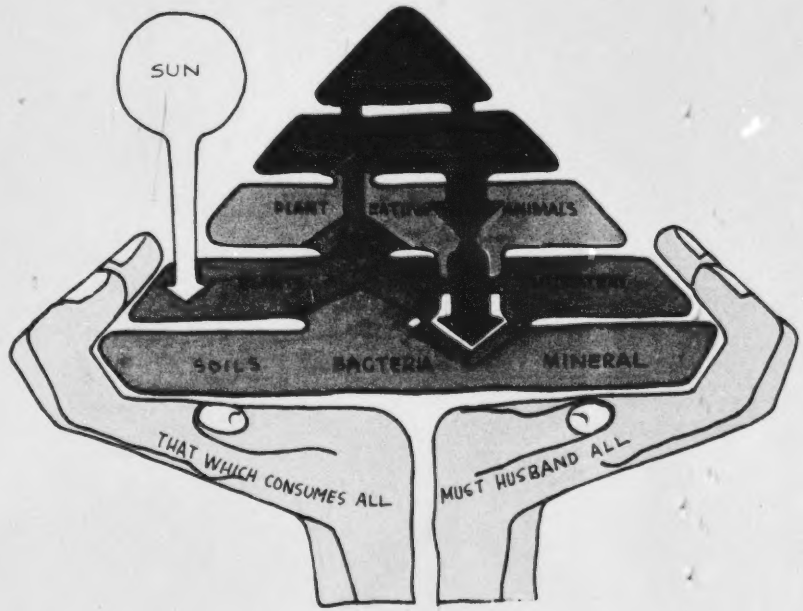
Perhaps Leopold's finest statement attributing an aesthetic quality in the natural environment is this brief selection from "The Song of the Gavilan", one of many published in the *Sand County Almanac*.

This song of the waters is audible to every ear, but there is other music in these hills, by no means audible to all. To hear even a few notes of it you must first live here for a long time, and you must know the speech of hills and rivers. Then on a still night, when the campfire is low and the pleiades have climbed over rimrocks, sit quietly and listen for the wolf to howl, and think hard of everything you have seen and tried to understand. Then you may hear it — a vast pulsing harmony — its score inscribed on a thousand hills, its notes the lives and deaths of plants and animals, its rhythms spanning the seconds and the centuries.[16]

15. Leopold, 1949.
16. Ibid.

As contemporary society accelerates and multiplies the demands for constant change, both for individual persons and for the collectivity, the need for a relatively permanent frame of reference which can allow change to occur without the sense of being lost in the process becomes increasingly important, just to be in frequent perceptual contact with the reassuring, enduring earth is a psychological security factor of considerable importance.[17]

17. Stainbrook, 1968.



Many other authors have referred to aesthetic values in their writings regarding the natural environment. Biologist Julian Huxley frequently did so. In his last annual report as UNESCO director-general he pointed out that "*natural beauty* [was as much a] *resource as minerals, soils, or forests, and just as much in need of conservation.*" His emotional response to viewing wildlife is expressed in the following:

The witnessing of wildlife on the grand scale can give a sense not only of privilege but also of wonder and deep emotion. To see large animals going about their natural business in their own natural way, assured and unafraid, is one of the most exciting and moving experiences in the world, comparable with the sight of a noble building or the hearing of a great symphony or mass.[18]

That aesthetic dimensions of the natural environment have validity is supported by recent events in the political forum. Heretofore it has been necessary to demonstrate in court that an intrusion into the environment presented a clear and present physical or financial threat in order to deter that intrusion. The courts now recognize the right of a citizen to maintain a suit on grounds of aesthetic deterioration of the environment.

Many Americans have never had an opportunity to develop aesthetic responses regarding the natural environment. Aesthetic responses grow out of individual experiences of seeing, feeling, and thinking. Perceptual awareness develops only when the individual has an opportunity to explore, discover relationships and developmental images of the natural environment. It is especially important for the young child to have such experiences.

The combination of awareness and a sense of aesthetics can guide all behavior and help to establish standards for governing our actions on the environment. Feelings underlie

18. Huxley.

"I sincerely believe that for the child, and for the parent seeking to guide him, it is not half so important to know as to feel. If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil. Once the emotions have been aroused — a sense of the beautiful, the excitement of the new and unknown, a feeling of sympathy, pity, admiration or love — then we wish for the knowledge about the object of our emotional response. Once found, it has lasting meaning. It is more important to pave the way for the child to want to know than to put him on a diet of facts he is not ready to assimilate."[19]

19. Carson, 1965.

29

actions, so many who may never understand ecological principles may nonetheless act to promote environmental quality because of a love of the natural world and an appreciation of what is beautiful in it.

The Role of Art, Aesthetics, and Design in Assuring Quality Land and Land Use

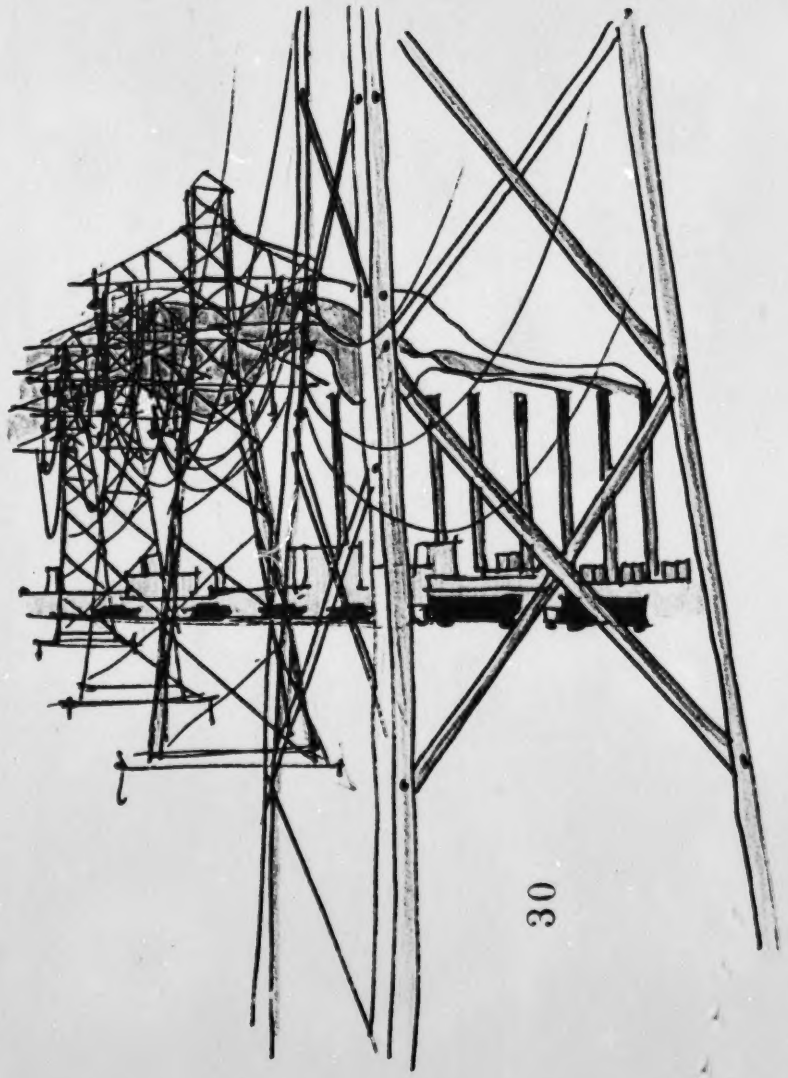
Problem

People have built and developed for centuries without considering the impact of human structures and uses upon their environment.

Urban migration has created sprawling centers of population; factories and automobiles have produced an umbrella of pollution over our cities; crops have been chemically treated to insure a better harvest. We have simply treated nature's landscape as an inexhaustible mine for people's use rather than as a tool for our ultimate survival.

True, we have advanced. But we have ignored the latent effects of our advances upon our life-support system. Urbanization and industrialization have created countless opportunities, but they have also produced an arsenal of potentially lethal side effects.

Today the primary task facing people, all peoples, is not to indict, not to lament over past mistakes, but rather to take steps which will direct people and their environment toward a less destructive state of equilibrium. This is in everyone's interest, whether he be student or worker, business executive or labor leader; for in destroying the only environment in which he can easily live, people are literally destroying themselves.



Process — Opportunity

A teaching plan to deal with the problems and a mechanism to carry out the plan should first consider that the blueprint for proper land use is provided in nature in the discernible *patterns* of the landscape. These patterns, identified and mapped, can serve as *form determinants* guiding the *'built patterns'* of people (highways, subdivisions, etc.) outside their critical boundaries. These patterns can be termed *'where not to build patterns'*.

These resource patterns, identified by a broad range of professionals representing the natural and earth sciences can be classified under two broad headings:

A. Patterns That Threaten Human Survival

If people and their development are not in harmony with these dominant environmental patterns, disaster often ensues. For example, building on a flood plain often results in a loss of life or at least in economic loss.

B. Patterns That Offer Hope for Survival

These are patterns offering hope not only for the continuance of life per se, but for the continuance of a worthwhile form of existence. The soil scientist can identify patterns of soil offering the best opportunity for food and fiber production. When these valuable agricultural patterns give way to housing and highway patterns the potential for food production diminishes accordingly.

C. Patterns Replenishing the Spirit Offering Hope and Happiness

There is more to life than just living, breathing, and eating. People have a spirit, a steadfastness of purpose that can transcend existence.

A role of art, aesthetics, and design is to portray these resource patterns in clear and concise sketches, plans, and models so that those charged with their wise alteration and enhancement can better deal with the complexities of multiple resource pattern comprehension. The arts, aesthetics and design serve as graphic communicators presenting complex resource data in simple recognizable media.

NATURAL & EARTH SCIENCES

DATA NEED REPORT

31

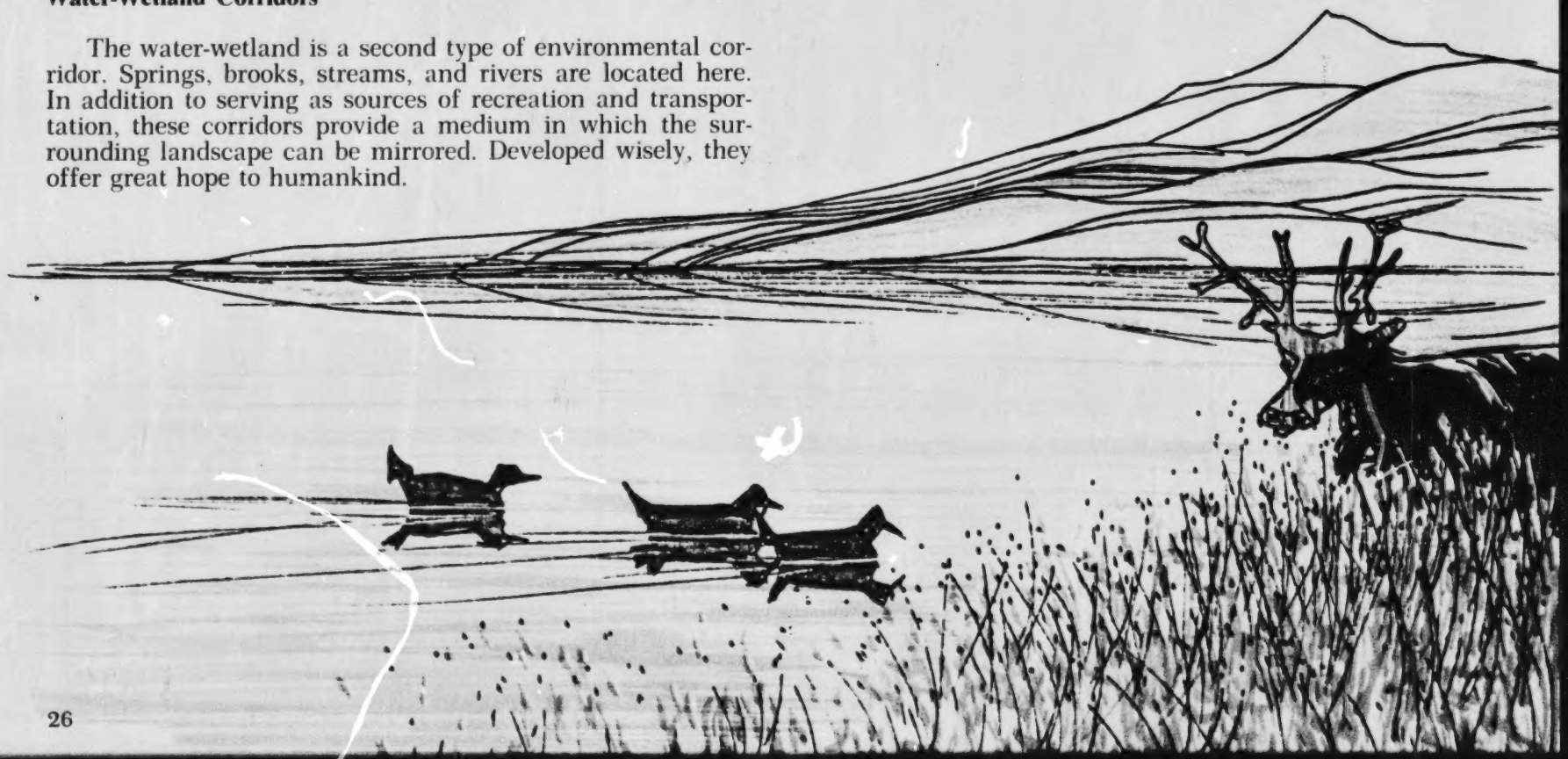
Environmental Corridors

Environmental corridors are areas relatively free of human use and impact. Protected and developed wisely, these corridors can offer hope of future generations. There are many forms of environmental corridors. Slopes and rims constitute one such type of corridor. Slopes are the basic landscape feature that separate the ridge-tops from their valley floors. Rims, on the other hand, are the uppermost edges of the slopes. They can be used for a variety of purposes, including the beginning of a ski slope, and the vantage point from which the surrounding countryside and its landscape patterns can be observed.

Water-Wetland Corridors

The water-wetland is a second type of environmental corridor. Springs, brooks, streams, and rivers are located here. In addition to serving as sources of recreation and transportation, these corridors provide a medium in which the surrounding landscape can be mirrored. Developed wisely, they offer great hope to humankind.

The role of art, aesthetics, and design has not only assisted in identifying these many characteristics of the land and landscape, but clarified their intangible and emotional meanings, more precisely through poetry, music, dance, art, crafts, the designed set of landscape symbols allows one to quickly identify individual and clustered quality at a quick glance. These symbols offer a graphic shorthand to "read" complex landscapes with ease. By aesthetic and cultural value determination, and by plotting of values, patterns of great diversity have also been revealed, offering future generations many options within their limited boundaries. Without such revelation, many values are lost daily. With such revelation new human patterns can be designed to fit these essential form determinant systems.



Nodes ot Interest

Numerous regional studies have indicated that surviving natural and cultural features usually lie within, or close to, environmental corridors. When grouped in clusters, within the corridors, exciting environmental and cultural nodes of interest that will help ensure well-being and happiness for posterity are created.

Again the designers have innovated programs to identify and to classify the various types of space we encounter. Creating spatial symbols, permits comprehending the existence and nature of space on a regional scale for regional design and planning.

Working with the behavioral scientist provides systematic evidence of how we react to various scales of enclosure and identifies sequences of enclosure as guidelines to new and exciting environmental exercises.

It is impossible to fit past and proposed urbanizing patterns of people in harmony with these cherished and essential resource patterns unless such value patterns have been identified, mapped, and communicated to those charged with changing the landscape.

Immediate recognition must be encouraged by everyone, to the fact that after almost two hundred years as a nation, most of these patterns have not been inventoried and graphically plotted on a state by state basis. Without such data it is impossible to impose human patterns of development without grave consequences for poeple and the land. The immediate task of completing such inventories is recognized as a monumental, necessary, and attainable task by many. The role of the arts in this overall endeavor is a most critical one.

Such studies to determine where not to build also reveal patterns where one can build.

Art, aesthetics, and design offer an outstanding opportunity of wisely designing these in-between spaces in a manner that provides quality "built" environment for people without destroying critical patterns essential for survival, happiness, and well being.

BEHAVIORAL SCIENCES

33

This endeavor focuses on creative imaginative 'built' patterns for people that provide optimum opportunities for living, working and playing. Deciding where to maintain the health of the natural landscape pattern requires the design team working with the natural and earth sciences. Now the design team must play a significant role, hand in hand with the behavioral scientist. What types of space, temperature, lighting, noise level, color, texture, pattern provides for optimum human performance at given tasks?

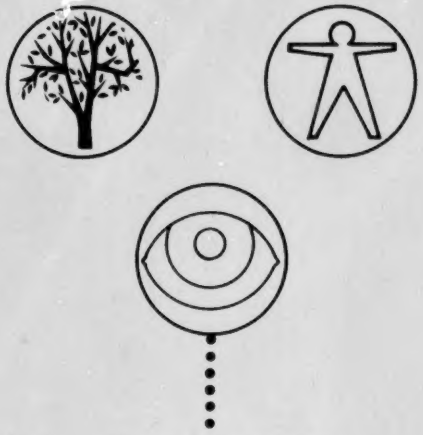
Only by a close association of the design team, the sociologist, psychologist, physiologist and medical talent can we truly design for optimum human health and performance.

The responsibility of 'classifying' and portraying three dimensional space as a basic resource (one of the most neglected ones) as mentioned earlier are beginning to offer new basic tools to the behavioral sciences for testing human reactions as they walk through space and varying sequences of space. Lessons to be learned from joint design-behavioral efforts will undoubtedly provide a more liveable environment for tomorrow. As economic conditions force a shift from single family houses to higher density apartments and megastructures, human responses to these new and developing surrounds must be stimulated prior to building expensive uninhabitable structures.

A quality environment tomorrow will depend upon how well we integrate the art and aesthetic design talents with those of the natural and earth sciences and the behavioral scientists.

In past applied demonstrations it has become apparent that the quantities of data about the health of a given landscape and the health of the people of that same landscape necessary for comprehensive planning is voluminous. This recognition has stimulated the development of techniques and hardware in an area often called *environmetrics*.

The arts, aesthetics and design team play a major role in not only manipulating various physical properties into various human surrounds, but graphically portray and simulate these options for human performance and testing.



ENVIRONMETRICS

The role of art, aesthetics, and design has and will continue to play an important part in the area of environmentrics.

The design of hardware both aesthetically and functionally has permitted staff members using the equipment to work long hours with a minimum of fatigue. In the interpretation of remote sensing and resource pattern photos returning from space, designers (especially landscape architects) have demonstrated unique capabilities at interpreting complex landscape patterns and offering outstanding advice on essential resource computer programming. They will continue to make major contributions in this essential component of a holistic environmental endeavor.

Observing, Measuring, Recording, Storing and Disseminating Critical Land-Use Data

An intense recognition of the need for a more enlightened regard for land and human resources is a phenomenon occuring across the nation.

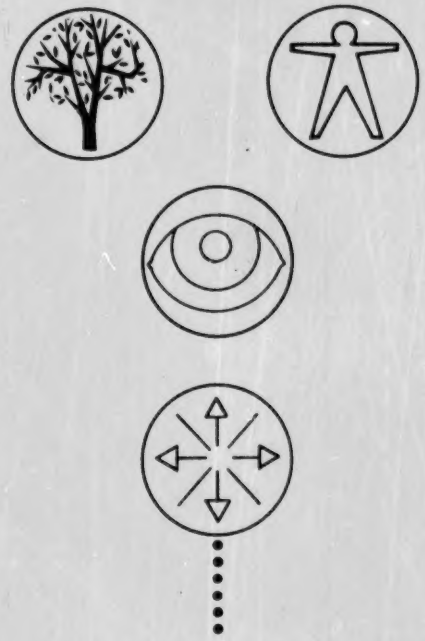
We need a system to store, retrieve and disseminate resource data to all corners of the nation and the globe.

Storing of collected data and resource patterns in the computer permits statistical analyses of a vast array of regional information determination of what relationships exist in frequency and distribution and often unique or rare resource patterns and potential patterns within various study areas are revealed.

The raw natural and cultural data stored in the computer maintains the objectivity and flexibility for future integrated analysis, allowing for combinations and interpretations of multiple variables in the design process.

It is one thing to have adequate resource data collected and stored in the computer for alternative 'print out' interpretations and quite another perceptually visualize these options for public involvement and understanding.

The Environmental Awareness Center, University of Wisconsin-Madison, has been advocating for years regional capabilities to receive vast quantities of information from computer storage and *simulate* in a highly graphic fashion, the results of integrating various options in simulation facilities. In such simulation centers "real world" exigencies would be simulated in order to study the potential consequences and degrees of risk inherent in various courses of action . . . before it takes



The arts must play a significant role if innovative centers are to be designed and built, if future concepts are to be dreamed, sketched, modeled, and filmed for imaginative public simulation.

place. The citizens of the prototype region could see, hear, and smell the consequences of putting an interstate highway through a magnificent marsh, next year, five years, and ten years from now, based upon accurate resource data.

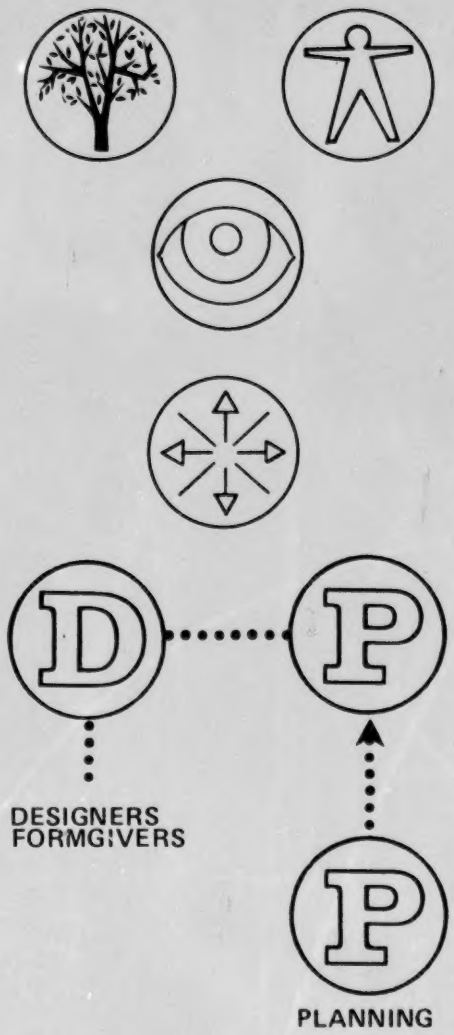
Concepts, however, just don't happen, concepts evolve from the creative manipulation (design) of honest resource data. Formgivers, architects, landscape architects, industrial designers, interior designers, artists, craftsmen, engineers and physical planners all soundly based in the field of aesthetics are continually challenged for new models, new solutions for rehabitating the past and designing the future.

Fitting the patterns of people in harmony with recognized natural patterns, providing for optimum physical surrounds for human performance, and stimulating environmental experiences daily, continually offer increasing challenges and opportunities.

In most of these challenging endeavors design concepts are seldom implemented unless the design team has worked closely with those professionals and non-professionals trained in the "art of the possible." The sociologist, economist, lawyer, political scientist, administrator, legislator, all offer advice helpful in implementing imaginative environmental concepts.

Without a close liaison between the arts (the "formgivers") and the implementers, many exciting and rewarding concepts are often lost. The implementers must be aware of the vast array of legal, social and economic tools available for wise environmental action.

An integrated effort between the design team and the implementation sciences can assure the public as many options for their perusal as humanly possible.



The arts can play a major role in the simplification through graphic portrayal of complicated wordy statutes, socio-economic theory, and an understanding of complex implementation tools. Without the arts making major contributions in this area, public understanding at the "grass-roots" leaves much to be desired.

Until clear pictures and concepts about people and their environment, the problems, potentials and casual relationships, are disseminated and become part of the common stock of environmental planning knowledge, there can be little progress in achieving proposed concepts.

Communications becomes one of the keys for environmental option awareness, for until the public can see the differences between things, until they can whet their discriminatory powers, only then will they become a society exercising freedom of true choice, and select through the sifting and winnowing process wiser options.

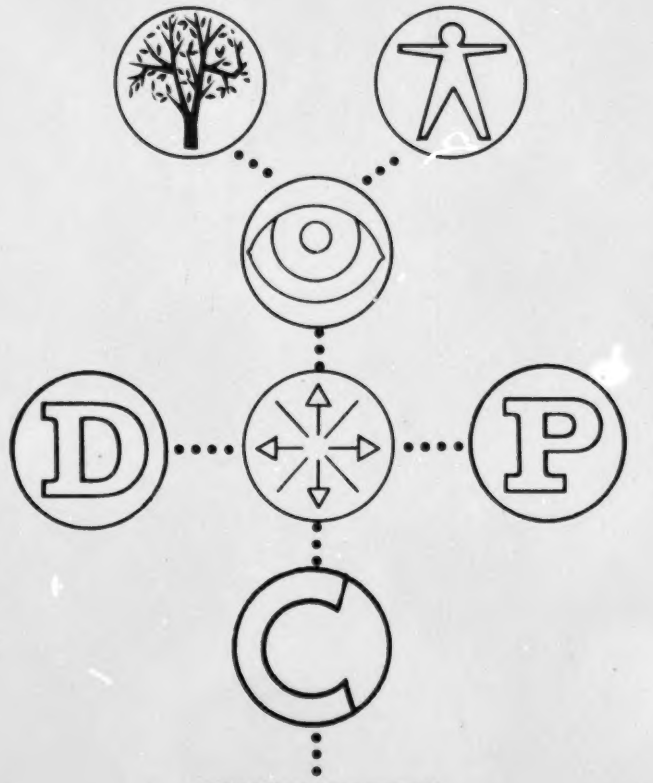
Recent advances in audio-visual presentation have developed a more direct relationship between the subject and educational options. Nothing short of exploring these new dioramas, three dimensional movies, computer programmed slides, and think tanks will do if we are to develop environmental awareness of alternative design and options.

It is generally conceded that if environmental quality is to be restored in America, public re-education to the life-giving imperatives and the intrinsic natural values is essential.

The student should be encouraged to participate in community classes, seminars and demonstration projects.

The task of communication is a vast one if we are to truly re-educate to new values.

The arts, aesthetics and design professions all contribute to the creation of imaginative communication media. If organized, the whole spectrum of the arts family could interpret new regional options far better than they have ever individually done in the past.



37

There is no reason whatsoever that one cannot today simulate a walk through a ghetto, along a polluted river, etc., and then simulate what it might be like if certain information and action were integrated. *It could be entertaining to learn!* It *must* be, if we hope to reach the learner with complicated environmental messages, and well thought out options.

One possibility is to create imaginative 'process' demonstration centers within our state. These Community Awareness Centers would serve as informational (nerve) centers, simulation labs, environmental museums, centers that through process would continually present clear pictures and concepts about the people and the environment of that specific region.

In addition to the interdiscipinary research being conducted in such centers one would find within the communication wing an 'interpretative' plan evolving.

In such centers the student would be able to step back into time to see visually the heritage of the prototype region, would be able to monitor on live closed-circuit television the realities of the present, and would be able to step into the future to see what entente could be designed between people and land. The net objective would be to relate the student to the changing regional environment and to suggest, through highly imaginative demonstrations, the way one can effect change for good or ill.

Another prime goal of the community awareness center would be concerned with portraying that regional landscape patterns provide a source of strength, spiritual health and wisdom for the individual, patterns that contain a heritage of experience and inner development beyond price.

It would then follow that man as a permanent resident of the world could organize the use of space and resources and proceed to plan his regions and communities in which life would be a rewarding experience.

TO SEE 10,000 YEARS OF SHORE EROSION IN TEN MINUTES

Urban Environmental Aesthetics

It has been stressed in the preceding sections that environmental aesthetics must take account of the man-made systems as well as natural systems. A city actually combines the two. It cannot function well if its structures and processes are not in harmony with the supporting natural systems of the land. Cities or urban regions have the highest density of human activity. Correspondingly, they offer great possibilities for positive achievement of aesthetic richness or aesthetic disaster. A city provides aesthetic richness when it is a happy creatively-oriented environment. When it satisfies the eye's demands for sensuous richness and the mind's demands for orderly and varied design the city is functioning as an aesthetic resource. But the city is also providing aesthetic value when it functions well to satisfy the needs for food, transportation, education, and all of the varied services that we require to experience a high quality of life.

We can approach the question of urban aesthetics in various ways:

One way is to examine the city as a theme in the fine arts. Here we see the artist's image of the city in paintings, music, poems novels, films, photography, and in dance and drama.

A second approach to urban aesthetics is to examine the fine and applied arts as resources for aesthetic experience and values in an urban environment. The architecture, the art museums, the symphony and other musical resources, the library, the art galleries, dance studios, the film theaters and laboratories, street murals — all of these act to stimulate the imaginations of all who experience their resources. One interesting way to discover the aesthetic potential of a city is to identify these resources and devise a plan to explore their aesthetic potential. It is important to extend the environmental aesthetics "learning laboratory" into the community resources in order to maximize aesthetic experiences.

"The ultimate purpose of a city in our times is to provide a creative environment for people to live in. By creative, I mean a city which has great diversity and thus allows for freedom of choice; one which generates the maximum of interaction between people and their urban surroundings."[20]

20. Halprin, 1972.

APPLICATION

A. Locate photographs and paintings showing a comprehensive view of a city and study the cities through their visual orders.

B. Find a vantage point (tall building, hill, etc.) from which to view a city. Make your own photographic mapping of the city. Draw or paint a picture of the city from the vantage point. On a more sophisticated level, use Kevin Lynch's categories to analyze the city spaces or design your own categories for describing the city in some ordered systems.[21]

21. Lynch, 1970.

39

The city grid patterns is mechanistic, infinite and insensitive to the natural environment upon which it is imposed.

Central to an approach to urban aesthetics must be the city itself. Looking at the city itself, these are different ways to approach urban aesthetics.

The first approach considers the city as a complex visual image. The painter or the photographer who gives a comprehensive image of a city is taking this point of view. The approach is perceptual, and it offers a representation of the city that can be expressed in the artist's vocabulary of linear perspective. The view presumes that the city is designed according to some set of agreed-upon principles of design that are primarily visual in character; the preceptions are limited to visual qualities, and represent only a single fixed point of view. Corresponding to this view is an aesthetic of visual design. Shapes, colors and linear values exemplified in the city design can be experienced through this approach.

A second approach to the aesthetics of city environments can be developed by perceiving the city as a sequence of ordered spaces. This approach is also perceptual. But instead of viewing the city as a static, closed system, we see it as a dynamic environment that can be perceived by moving through its spaces. The approach gives us a multi-sensory perception that includes active selecting, screening, constructing, in relation to the design principles that are exemplified in the space orders. What are the aesthetic-design values that can be experienced in this approach?

A. Appropriateness of the space — of the architectural arrangement to its purposes and uses.

B. Appropriateness of size and scale of the space to order human physical and psychological scale of values.

C. Openness with sufficient boundaries to give definition to the space.

D. Sequential (or other) connections of proximate spaces.

"When the parts of a city lack visible relation to one another, their incoherence can contribute to a sense of alienation — of being lost in an environment which one cannot carry on any sort of dialogue."[22]

22. Lynch, 1970.

Over 60% of our city streets are devoted to vehicular use. These dehumanized environments ignore human scale and the sense of place.

E. Integration of architecture with surrounding areas.

F. Application of a formal or natural design, e.g. symmetry, axial arrangement, or following dominant lines of the land contours, rivers, etc., that provides a directing influence upon the environment.

G. Provision for the exercise of imagination and free value choices.

One prime resource essential to the well-being and happiness of people, and one which replaces monotony with diversity, variety, and human interest is that of three dimensional space. In the hands of the artist and designer the molding of space can become one of the most critical resources for human enjoyment.

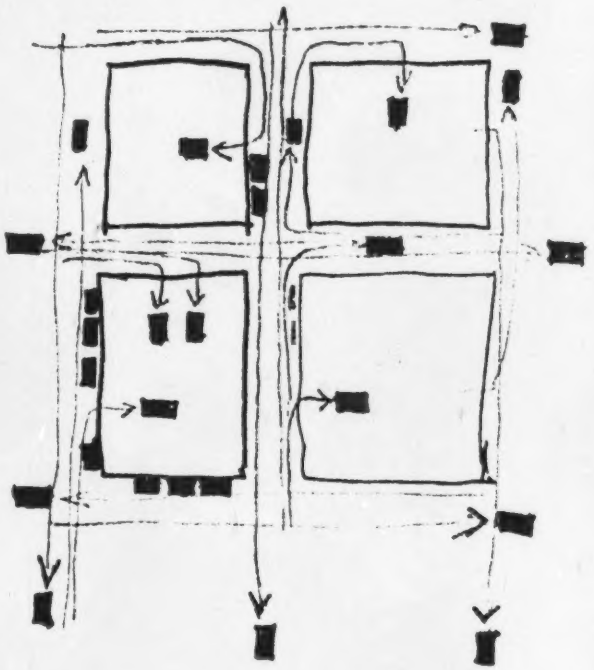
In walking down an urban street we are typically aware of a series of 'built' cubes enclosing us on either side called buildings, homes and offices. They have normally been designed to be looked at, they reflect the talent of the designer, the availability of certain building materials, and in turn reflect a certain historic period.

Seldom do we visualize the three dimensional space *between* buildings as a solid resource that too can be moulded and given form providing refreshing sequential walking experiences. Some years ago the English architectual Review referred to this 'in between space' as the '*great out there.*'

A third approach to urban aesthetics sees the city as a set of intertwined activities. Its functions are communication, movement of persons, exchange of goods and services. The aim of the city understood in this manner is to provide a whole environment that supplies the conditions for a high quality of human life. Here the aesthetic value of the city can be expressed in more general terms. The aesthetic is not limited to perceptual or sensory values alone. It extends to

APPLICATION

Take a walking trip through various sections of a city. Try to identify and experience the values suggested in the above list. Describe the ordered sequences of space that you experience. Pass through the same area on a bicycle, in a car, in a bus, etc. Record difference in your experience of a space due to changes in the rate of movement. What other sensory information do you experience when you move through the city spaces? Record these along with your experiences of space.



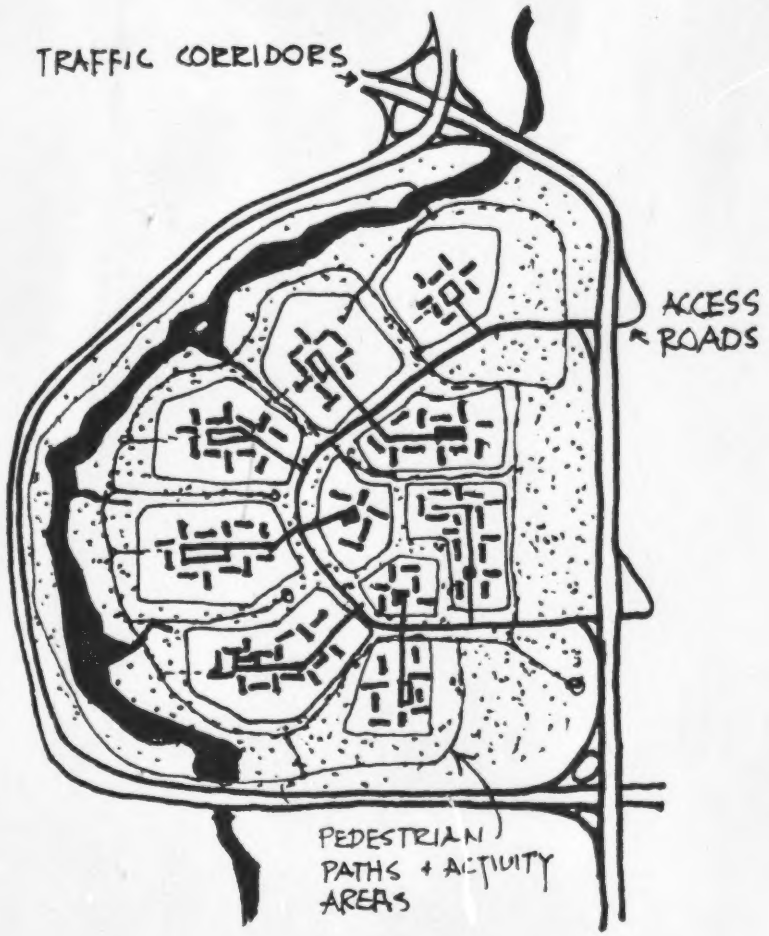
The rectangular street and road system is not designed for the volume, mix of local and thru traffic and variable speeds of automobile traffic.

41

a quality of life that manifests itself in human happiness and well being that results from the urban systems functioning to serve the needs of its inhabitants.

A fourth approach to urban aesthetics is to consider the aesthetic richness provided by its ethnic diversity and its historical artifacts. The United States is a nation of immigrants, a blending of different ethnic groups, cultural values and religious beliefs. The German towns, the Scandinavian settlements, the Italian gardens and vineyards, and the Irish saloons that are found in cities are as American as the log cabin and the covered wagon. Our venerable old homes and cobblestone roads, our spired churches and historical buildings are as much a part of this nation's aesthetic heritage as Valley Forge and Fort Sumter. Few would advocate the preservation of these historical artifacts simply for the sake of preservation, but most would agree that they denote something that is worthy of the private meditation of each and every American. Preserving these symbols of the American past allows future generations to understand the heritage with which we evolved.

A well trained designer recognizes that three dimensional space is created by walls of man-made materials, vegetation, or even land form. He recognizes that from interior building rooms created by walls of plaster and wallpaper, one can walk into outdoor rooms created by rows of trees, mounds of earth or facades of buildings. But most important of all is his ability to manipulate these walls to provide diversity of the walking experience. He can create a spatial tunnel of trees to guide one into an exploding arrival within a vast outdoor plaza, and back again into restricted alleys and sidewalks providing spatial excitement not found in most "square block" cities. A rhythm not unlike that found in music composition can be created. Like all resource patterns space as a resource is of value if it can be identified, classified, experienced and plotted.



A balance between vehicular and human activities must provide. Zones set aside for human activity, access strictly for service traffic and parking and corridor for vehicular movement.

Concepts and Skills For Environmental Aesthetics

Aesthetic discrimination is the perception and selection of what is pleasing and self-satisfying in the environment. It provides an awareness which is a foundation for making sound decisions regarding life styles and environments.

Preceding all other concerns for the environment is the simple recognition of the dimensions of one's surroundings. Form, line, color, scale, texture, light, space, shape and pattern are but some of the dimensions of the environment; the awareness of which precedes the critical analysis necessary for designing or redesigning one's surroundings.

As has been repeatedly stated, competent environmental planning must include awareness of the way in which man has changed the earth and the way in which modern technology has been defacing the environment and lowering its habitability. Knowledge must be applied to actual environments by:

1. Caring for natural areas, wet lands, lakes, rivers, forests.
2. Choosing sites for future developments.
3. Re-establishing human norms and life furthering objectives in urban areas.

The previous statements have stressed that in handling every part of the environment emphasis must not be on either design or nature by itself but on the preposition *with* which implies human cooperation and biological partnership.

We should seek, not arbitrarily to impose design, but to use to the fullest extent the potentialities and with them, necessarily, the restrictive conditions that nature offers. So, too, in embracing nature, man's own mind, which is a part of

KNOWLEDGE

Design provides a visual language mode of structuring and perceiving the visual environment.

Design encompasses all those forces that have a bearing upon the shape of man's environment.

The designer communicates not merely by the theme he selects but by the manner in which he develops the idea through the use and organization of expressive qualities of materials.

The aesthetic quality of the environment is the result of how the designer deals with the principles of design which involve: harmony, balance, rhythm, variation, contrast and repetition; the elements of design which involve: line, form, space, pattern, color, light, shape, scale and texture.

nature, has something precious to add that is not to be found at such a high point of development in raw nature. The solution is not in "crash programs" or instant solutions, but is in laying a fresh course of stone on a ground plan already in existence that builds the foundations for a new civilization.[23]

In the educational process it is vital to see nature and human activity from within, as a participant and actor, and bring to the often colorless world of science the special contribution that differentiates human beings from all other animate things. Vivid color, emotions, feelings, sensitivities, and aesthetic delights make the human mind at its fullest immensely superior to under-dimensioned minds that have adapted themselves to a computer's limitations.

Concepts provide broad application based on relatively stable knowledge. Concepts should be closely related to particular age levels or courses in order that the subject may be more easily understood, retained and reapplied.

Concepts should be introduced as by-products of an active process so they can be *felt* before being verbalized. Words and other modes of communication should be used to sum up and give conscious form to what has already been sensually experienced.

Concepts are useful for many reasons. They aid in communication, they serve as tools for thinking and serve to give meaning and order to reality. Students at all levels should be encouraged to conceptualize and reflect upon their aesthetic experiences.

The forces of change in environment make it imperative that students become more knowledgeable about design as it relates to the environment. Aesthetic knowledge must be viewed as both a tool to be applied toward the environmental planning and solution of environmental problems, natural and man-made in a world of constant change.

23. Mumford, 1969.

Environmental Aspects of Art Programs

There is no doubt that environment affects the personality and actions of the individual. And the individual in turn affects his environment. He comes in contact with other people whose actions he changes through association. He shapes his physical environment, molding it to his own liking.

Awareness of these facts should be a guiding principle in the application of environmental aesthetics, and should increase the awareness of "oneness" of people and "wholeness" of the earth.

To become aware is to sharpen senses and sensibilities. Different levels of awareness should be encouraged which follow the natural development of the child.

PERCEPTUAL AWARENESS

Awareness is conceived by perception through one or more of the senses.

Sensory perception varies among individuals due to association with previous experiences.

Man's perception through all his senses increases his awareness and sensitivity to the aesthetic quality of the environment.

Early perceptual experiences with the natural environment may lead to satisfaction of aesthetic, emotional and spiritual needs.

Man must educate his visual sensibilities in order to live harmoniously with his physical environment and himself.

Man's response to his visual environment must be heightened in order to more fully sensitize him to the magnitude of visually expressive communicative and responsive possibilities.

An environmental awareness approach will explore such areas as the functional and aesthetic arrangement to immediate surroundings, neighborhood improvement and town planning, the man-nature relationship and the challenges of ecology.

In considering environmental aesthetics, children should become more aware, more perceptive through all of their senses.

The challenge is to recognize the arts — environment alliance and to make constructive use of it. Through arts and related learning experiences, the students will become more aware of the environment and its aesthetic dimensions.

Teaching strategies should be in harmony with the background and age of the children recognizing the diversity of abilities and interests among children of the same grade level in different areas and different school systems.

This program should be considered in broad terms. The cornerstone for any effective arts program is awareness and the arts support and reinforce goals of perception in all environmental studies at all levels. The students should be helped to see and understand their world and to appreciate its beauties.

A creative way of seeing should constitute a continuing study of on-going discovery. It begins with the young child and focuses on simple qualities of the near and familiar. He is encouraged to see colors and forms of objects around him. Awareness of the immediate surroundings doesn't stop with those first discoveries but increases and deepens.

A conscious awareness of abstract patterns derived from surface textures, relationship of light, form and space is developed through visual perception.

Particular skills are learned as the need develops through discovery and conceptualization. These skills help the child to interpret what he has seen and to translate his impression of the world around him into a creative statement of his own. Discovery and conceptualization are the means by which children learn techniques that will improve visual communication.

CONCEPTS

The aesthetic qu lity of the environment is affected by technological development of new tools, methodology and materials.

The aesthetic quality of the environment is dependent upon understanding the nature, culture, technology, people, ideas and emotions in one's surroundings.

Man is the most influential force in affecting the aesthetic quality of the natural and man-made environment.

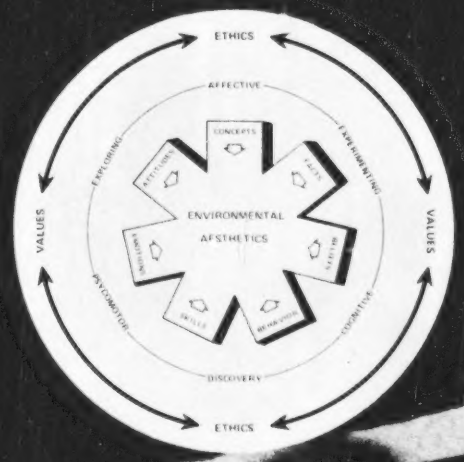
The variety and changing forms of land use affect the aesthetic quality of the environment.

The aesthetic quality of life can be increased by improving the design of the natural and man-made environment.

45

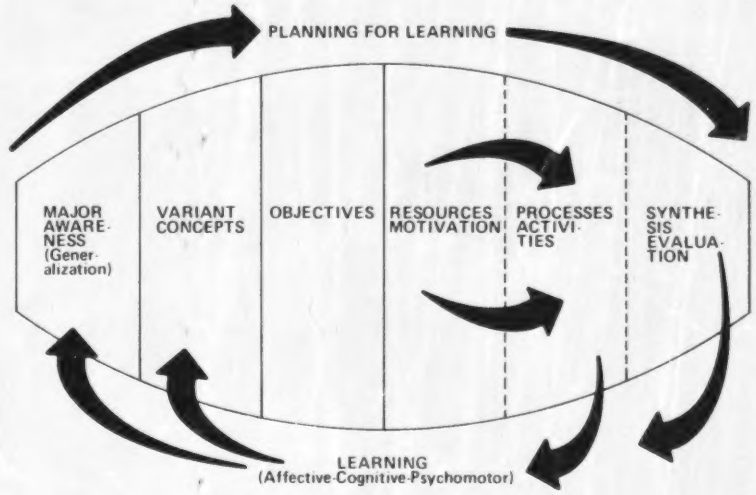
SECTION II

HOW TO PUT IT ALL TOGETHER



Facilitating Aesthetic Awareness and Conceptualization Through Cognitive, Affective and Psychomotor Learning Processes

The accompanying planning/learning model can best be implemented through discovery modes, incorporating such things as inquiry, inductive processes, sensory experiences and experiential situations. The role of the teacher is to organize learning experiences which will permit each learner to explore and discover new meanings related to the aesthetic quality of the environment and the aesthetic quality of life. Effective exploratory and discovering learning experiences place the responsibility for initiative and control of the situation upon the learner. The teacher serves as an organizer and facilitator of learning processes.



The learning process should incorporate affective, psychomotor and cognitive experiences. It should stress creative and aesthetic awareness and responses as learning outcomes. These outcomes are generally relegated to the arts, but what is needed is to embody in all areas of environmental education those values, attitudes, concepts and modes of expression exemplified in the arts. In order to do this, the learning situation should begin with multi-sensory awareness experiences which will motivate each individual to explore values, emotions, data and skills related to a situation and to then synthesize this internally or externally. Internal synthesis would result in new or modified values, knowledge and attitudes. External synthesis would result in creative, aesthetic behaviors which is expressed both verbally and non-verbally through such forms as: the visual arts, music, creative movement or dance, creative writing, perception or social action.

Preparing for Curriculum Planning

Conceptual learning based upon exploration and discovery requires many and varied resources. The following elements are essential for planning meaningful individualized learning experiences:

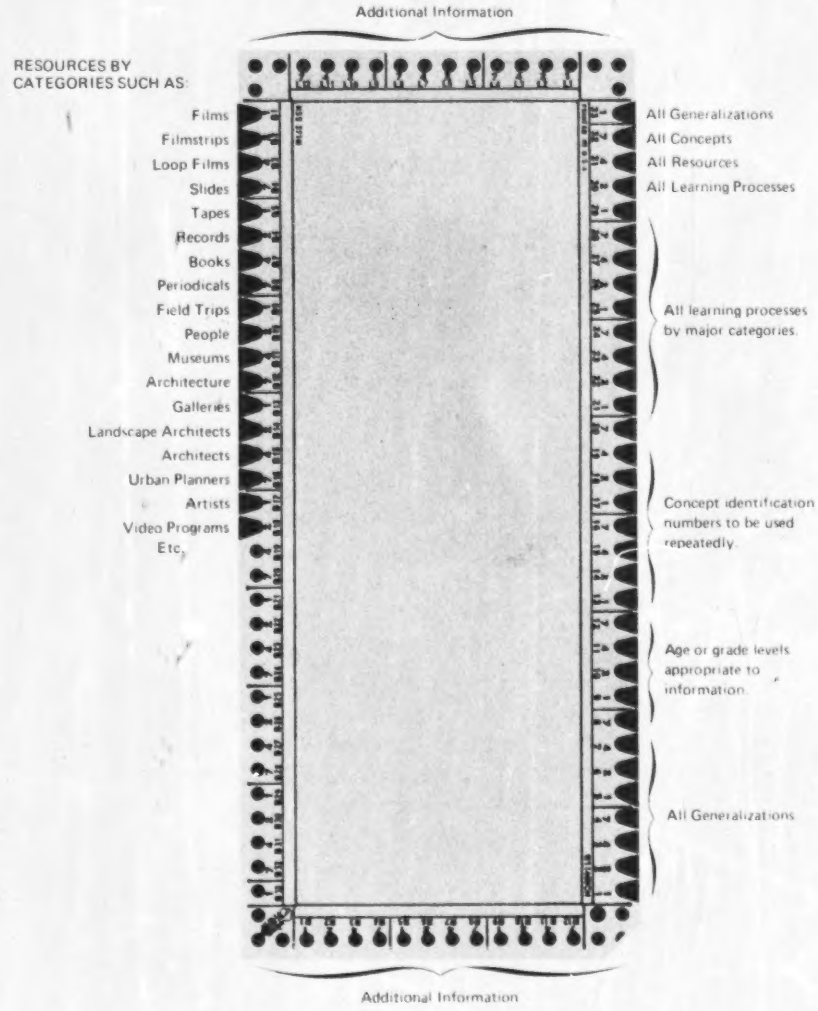
- A conceptual framework should be developed which stresses significant ideas that are organized for appropriate levels or areas of learning.

- A retrieval system which permits quick and easy identification of a vast variety of resources which will serve as motivation and information related to the objectives of the learning experience should be established. It may be organized on keysort cards, (see example) or listed on index cards or in catalogs.

- A listing of basic subject matter content (skills, facts, materials, activities) which the learner will use as a vehicle to understand and communicate meanings and feelings related to the concepts selected for learning is necessary and this information should also be included in the retrieval system.

- A variety of synthesis and evaluation methods which will help both the student and teacher to understand the meaning and effectiveness of the learning process experienced should be identified.

- Appropriate planning form/s should be developed which may be used by teachers to organize units of learning. The example on page 43 is one possible format.



All items in the keysort system would be written on separate cards and each card should be keyed or notched to correspond to one of the generalizations. Additional information and flexibility may be obtained by cross-referencing and including additional information. For example: A concept card may be notched to identify the most appropriate grade level at which to introduce the concept and it can also be notched with an identification number which may be used to relate other information to this concept.

GENERALIZATION: _____

CONCEPT/S: _____

OBJECTIVES: _____

RELATED MOTIVATIONAL, INFORMATIONAL RESOURCES	APPROPRIATE LEARNING PROCESSES	SYNTHESIS-EVALUATION

The Conditions for Aesthetic Learning

If students are to develop a new environmental ethic — based on aesthetic valuing — where man is acknowledged to be an interdependent part of his biological and physical environment, we must begin by considering the following five conditions that affect our current educational programs.

1. Renewed emphasis on existing programs in the arts as agents of affirmative action and change is one of the alternatives that can be considered from a curricular context.

2. Identification of a number of scientific learning conditions that can affect, or be affected by, an emphasis on aesthetics in almost all learning experiences will facilitate instruction which demonstrates the interactions and interrelatedness between man and environment and the importance of aesthetics in influencing the quality of this interaction. These interactions should be modified or controlled in order that the conditions of learning have an aesthetically-oriented base.

3. Many of the attitudes and values that children bring to learning are affected by the classroom conditions under which instruction occurs. The productive school environment is a complex network of spaces, areas, and people that enable children to sit, move, think, sing, stand, sculpt, eat, and grow. Provision should be made to assure that as the child engages in these activities, aesthetic learning will occur.

4. In addition to physical and human conditions, the school is also shaped by various unseen forces such as the attitudinal and economic status of the community. Procedures should be developed which communicate, to the decision makers outside of the school, the importance and value of aesthetics in fostering environmental quality.

5. The conditions for aesthetic learning should be identified. They include psychic, social, physical, cultural, and institutional factors. The teacher's role should focus on the opportunities for aesthetic emphasis to be found in ordering and integrating these factors into meaningful instructional activity.

These five conditions of learning each contain an ambiance of aesthetic "givens" that the resourceful teacher should become aware of and control through the selection of motivating and teaching strategies, instructional materials, and the structuring of interrelated learning experiences.

Psychic Conditions Influencing Environmental Aesthetic Education

The psychic factors that the teacher deals with are basically affective and attitudinal. They include:

- The conceptions of learning by the learner on a passive-participatory continuum.
- The conceptions of teaching by the teacher on an authoritarian-democratic continuum.
- The conceptions of the learner from an intrinsically or extrinsically induced continuum.
- The conceptions of teacher by learner on an open experiential continuum.
- The conceptions of teacher by teacher or learner by learner on a self-concept continuum.

Cultural Conditions

The cultural factors that must be dealt with as conditions for aesthetic learning include:

- The nature of man
- The funded and personal knowledge of man
- The ethnic background of the learner
- The structure or nonstructure of related subject matter

Social Conditions Influencing Environmental Aesthetic Education

The social factors in the school environment include:

- All educational forces existing in society
- The societal needs of the total community
- The socio-economic level of the community
- The social norms in the community
- Repositories of information, skills, and processes in the community

Institutional Conditions Influencing Environmental Aesthetic Education

- Curricular goals, decisions, resources, and constraints
- Administrative structure and effectiveness
- Philosophies and goals of the system
- Evaluative processes and emphases

Physical Conditions

Physical conditions that must be dealt with in facilitating aesthetic conditions for learning include:

- Aesthetic quality and condition of the entire school site
- Adaptability of the school to modification
- Instructional resources available — from textbooks to technology
- Size of student population
- Other school personnel: aides, specialists, psychologists
- Student age and grade level variables
- Reordering, restructuring, translating, and synthesizing these conditions into aesthetic frameworks represents the primary role of the teacher as an interactive change-agent. Each factor listed under the five headings lends itself to an aesthetic emphasis.

A complete taxonomy can be developed that would translate these conditions *of* learning into conditions *for* aesthetic learning. As the learning associated with all aesthetic experiences merges with the total curricular and instructional organization of the school district, aesthetic valuing will permeate the general educational program and, in so doing, will promote a total environment in which the needs of all segments of society will be viewed through an aesthetic perceptual screen. While this seems at first glance to be a massive undertaking, the identification of discrete learning conditions and introduction of aesthetic implications into each condition at all levels and in all areas is not an impossible dream. We acquire our aesthetic attitudes and values via the same acculturation processes that we use to acquire our social and asocial values. The consideration of aesthetics in environmental decision-making will release us from the level of technological existence and introduce people in our society to a larger, more intrinsically rewarding, quality of life.

Planning for Learning

The planning for learning process moves from left to right on the model. It involves a sequential and developmental evolution of factors related to the various categories. The following procedure may be utilized in the planning process:

1. Select one of the generalizations to be stressed as the focus for the learning unit. (See conceptual framework pp. 48-52)

2. Select one or more related variant concepts which have been identified as being appropriate for the subject area or age or grade level.

3. Establish broad objectives for the learning unit. These objectives would be based upon: interpreting the meaning of the generalization and concept/s as learning outcomes, an examination of ethics, values, beliefs, attitudes, behavior and feelings related to the generalization and concepts selected. These objectives might also identify factual information, skills and knowledge basic to learner competency in a given subject area, and they might reflect the major goals of education. These objectives will become the criteria for selecting the appropriate resources and learning activities or processes.

4. Identify and select informational/motivational resources relevant to the generalization, concepts and objectives of the unit of learning. These resources should include experiences related to the three domains of learning — affective, psychomotor, cognitive. The cognitive might include didactic, factual information and observations or problem solving. The affective/psychomotor might include tactile/kinetic situations, visual imagery, sensory experiences, fantasy, the unusual and ambiguous.

5. Select and organize learning activities which will provide options for perceiving examining and responding to the situation created by the motivation and information presented. Again, the activities should include the three domains of learning, but the stress should be placed upon affective and sensory experiences. The content and proc-

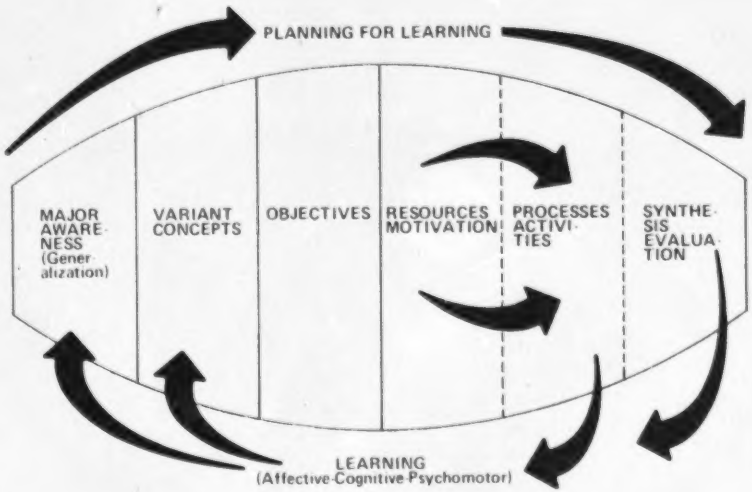
esses may include any of the techniques, materials, skills, facts, dialog, group interaction, gaming, role playing, creative/aesthetic statements and expression considered to be part of a traditional education. They should not be considered to be ends in themselves but rather tools and vehicles for examining, exploring, understanding and communicating feelings and ideas from a personal, creative and aesthetic point of view.

6. Consider processes which will allow the learner to personally evaluate, understand and assimilate the learning experience. Establish processes which will permit sharing of feelings, ideas, beliefs, attitudes resulting through the learning experience. Develop observation and evaluating strategies which will help determine the degree of effectiveness the unit of learning provided in fulfilling its established objectives.

The Conceptual Learning Process

This is a discovering, inductive and open-ended process of personally arriving at feelings, understandings, beliefs, attitudes and behaviors related to concepts and major ideas (generalizations). These learning processes should include an examination of the varying interpretations of these concepts in a free and pluralistic society which is shaped by a variety of ethics and their related values. Students should be helped to clarify and understand conflicting ethics and values which pull and shape our society and individual beliefs and behaviors. An examination of this type can be achieved through a creative and aesthetic learning process which begins with the central elements in the right sphere of the curriculum model and moves toward the left sphere of the model.

The nature of aesthetics requires that the emphasis of these learning experiences be upon perception and experiencing and the intrinsic aspects of learning. End results or



The resources and activities identified in these two sections are frequently very closely interrelated and reciprocal in character. The two categories have been established to facilitate analysis and organization of the learning experience. This area should not be thought of as being compartmentalized or linear but rather as interrelated and dynamic.

EXAMPLES OF THINGS THAT COULD BE CONTAINED IN THE PLANNING MODEL

The personal, ambiguous and generally affective character of aesthetic learning does not lend it to predictable, uniform, immediate or quantifiable outcomes. The major part of this evaluation process will relate to open rather than closed types of conclusions.

products are generally considered to be of less importance. They frequently are overt manifestations of the experience and a means by which the student records and communicates ideas and feelings growing out of the learning experience. The generalizations and concepts should not be taught as facts or things to be memorized, but rather their meaning should be arrived at through personal discovery. Each student should have the opportunity to interpret the experience from a personal point of view. The intent is not to indoctrinate students with a particular predetermined set of ethics, values and facts, but rather to permit them to explore, through various modes of aesthetic and arts learning activities, the meaning and implications of various ethics, values, and concepts prevailing in a free and pluralistic society.

There are many modes or strategies which might be utilized to arrive at these kinds of responses. Fundamentally the student should become involved in a variety of motivational/informational situations (see this section of the curriculum model) which will create a new or heightened awareness and understanding of factors related to the objectives, concepts and generalization. This awareness should cause students to respond in creative and aesthetic modes (see processes and activities section of model). The responses could involve intrinsic and extrinsic activities which would result in modified or new attitudes and behaviors or products of an aesthetic or artistic character.

The process of synthesizing and evaluating should help the learner to comprehend the implications of what has been experienced and to also permit other members of the group to share their understandings, feelings and resulting products with one another. This group sharing, synthesizing and evaluating can broaden each individual's viewpoint and permit "testing" of their beliefs. This evaluation should also permit the teacher to determine to what degree he or she has been effective in organizing and facilitating the learning process. As stated previously, many of the effects will not be clear-cut, immediate or measurable, but many judgments may be made which will provide sound insights.

Covert responses such as valuing, appreciating, contemplating and so forth are frequently personal; and difficult to assess; these responses are the basis of self-actualization and educational growth. Progress in these areas will be exhibited through student attitudes such as enthusiasm, commitment, involvement, contemplation, acceptance and the like. Most methods for determining whether or not covert type objectives are being achieved will be based upon inference from student behavior.

The expected outcomes of the learning experience might be overt or covert responses. In overt situations, the expected outcome would be demonstrated by the behavior itself. If the expected outcomes are covert responses, the overt expression would only be an indication that the expected covert response may be occuring.

Overt behaviors might be of two kinds: *Immediately Observable* acts related to acquisition of specific facts, knowledge or skills; and *long range observable* acts of utilizing and practicing acquired knowledge and skills.

Conceptual Framework

The following conceptual framework is not an all inclusive listing of significant concepts related to the four generalizations. The concepts identified here are related to a varied and comprehensive understanding of each generalization. They should be used as a beginning resource in developing local school curriculum. Additional concepts should be identified from other sources such as the various subject areas in the curriculum and related bodies of knowledge. A teacher or curriculum committee might also designate which concepts are to be introduced within a particular age or grade range. No attempt has been made here to designate a developmental or sequential structure of learning but it is assumed that a sensitive teacher will select concepts most appropriate for a given situation and organize learning experiences which are understandable and interesting to the unique needs and capabilities of his or her students.

Aesthetic Components

Generalization

The aesthetic components of the natural-cultural environment are essential and critical for developing the quality of human life.

CONCEPTS		
Aesthetics provides a philosophy for learning about the art-like processes of the natural-cultural environment, and the human responses to these environments.	The design of urban structures and spaces shapes the quality of life in the urban environment.	Observable in nature as in art design structure is an organizing principle through which parts and pieces are brought together into a unified shape and form.
Planning for regional land uses in harmony with the patterns of nature determine the long-range quality of life.	Aesthetic experience is the mode of appreciation and understanding that we acquire through the senses, together with intuitive, affective, and cognitive processes.	Cities are the dominant created environments. They exhibit space-form qualities in their basic design patterns; display visual shapes, colors, and textures; are perceptually ordered sequences of space; and city environments are multisensory.

Aesthetic components include the categories of formal structure and its design; expressive feelings, moods, and forces; and sometimes the symbolic meanings of art and art-related processes and constructions.	Respect for the intrinsic patterns of nature enhances the aesthetic quality of life.	Emotional reactions can be elicited by exposure to physical objects and geometric forms.
Continuity and change can exist in design structure.	A line possesses the ability to induce predictable psychological and physiological reactions in a person, who passes along it.	Aesthetic resource and recreational facilities of economic and non-economic value are becoming increasingly important in leisure time activities.
The organization of parts into a whole is an environmental design characteristic.	Opportunities to experience and enjoy nature are psychologically rewarding to many and are important to mental health.	A sense of place is man-made and the sum of all those environmental characteristics that distinguish a part from a whole.
Availability of technological and aesthetic skills are major environmental determinants.	The need of man to turn inward for self renewal can be stimulated by his external aesthetic experiences.	
A center, not necessarily geographic, of a community fixes it in space and imposes a visual order on the environment.	A sense of place implies physical qualities which allows one to differentiate between aesthetically satisfying and dissatisfying environmental qualities.	
Architecture is one of the major influences in developing an aesthetic and congenial environment.		

Interaction

Generalization

There is a measurable correlation between the quality of life and the degree of aesthetic awareness exhibited in human interaction with the environment.

CONCEPTS		
The individual perceives the total environment through the senses.	Design structure is capable of being recorded, communicated, tested and reproduced.	Design structure evolving into its present day forms arose from functional requisites of defense, safety, efficiency, health, legal controls and the aesthetic needs of larger numbers of people sharing a common environment.
Perceptual awareness makes us conscious of the many similarities and differences which occur in the natural and constructed environments.	Circulation, the act of passing from place to place, is an essential form of communication and symbiosis.	Design structure is a human artifact composed of willful and random arts finally and intelligently directed to aesthetic social purpose.
Perception through all of the senses increases awareness of and sensitivity to the aesthetic qualities of the environment.	The kinds of circulation available determine the size, scale and quality of the human habitat and environment.	The bio-physical environment, living and working zones and movement corridors must be dealt with as a total design and not considered separately in urban development.
We learn to distinguish the positive aesthetic components of the environment by exercising perceptual, intuitive, and conceptual discrimination.	Urban decentralization is caused by the urban environments that are dehumanizing, demeaning physically and aesthetically and devoid of nature.	Available modes of communication are determinants to community form-giving.
Cumulative aesthetic experiences will provide knowledge of the aesthetic criteria and principles of design upon which to base decisions relative to environmental quality.	Historically, early design structure emerged from natural conditions and symbolic acts.	Man becomes the measure of space in a society which values human beings.
Man in primitive, non-technological cultures built what nature would permit.	Most large communities are composed of dominant and subordinate centers which accommodate their pluralism.	The relationships between man and natural environment are motivated by his culture.

Awareness

Generalization

Aesthetic awareness develops as a result of formal and informal aesthetic educational experiences within environments where natural, artistic, and other cultural options can be perceived, compared and selected.

CONCEPTS		
Environmental aesthetic education in its broadest sense encourages learning related to aesthetic aspects of all curriculum areas, with emphasis upon art education, fine arts activities, and the aesthetic factors in the natural and urban-regional environments.	There are four basic designs for movement networks: radial, ring, grid, and linear.	Social change brought about by rapidly accelerating technological development affects aesthetic awareness and values.
Aesthetic sensitivity and understanding develop through a combination of informal and formally structured learning experiences which relate to nature, the man-made environment, and the fine and applied arts.	Ability to perceive increases awareness and develops environmental perspective within the individual.	The mass media strongly influences aesthetic awareness and shapes the individual's perception of what constitutes an aesthetic environment.
Shaping of the environment may be intuitive, arbitrary, and simplistic or it may be rationalized and deliberate.		

Ethics and Values

Generalization

Environmental aesthetic education is developed through the examination of ethics and values in the context of a holistic inter-disciplinary approach to learning.

CONCEPTS		
Ethics is the base from which priorities and principles governing right action are determined.	Ethical decisions and actions affecting the environment must be based on relevant facts and awareness of both immediate and long-range consequences.	Aesthetic and ethic values are pervasive qualities affecting all human environmental decisions and actions.
Ethical action is often sacrificed for short term economic considerations.	Man uses ethics to test the rightness or goodness of his decisions and actions.	When ethical goals are agreed upon, their implementation may not be agreed upon.

Knowledge of the ethical history of our culture will help us understand our present system and provide some awareness of other systems.	Values represent the ultimate reasons people have for acting as they do — their basic aims, objectives, aspirations, ideals.	Knowing and understanding one's own values is an important part of the learning process in order that we better realize what sorts of things are meaningful to us, what are we striving towards and what sort of world we want to see.
Some ethical systems are inadequate for environmental aesthetics.	Each curriculum area can contribute to environmental aesthetic education by developing awareness of the aesthetic aspects within its discipline.	Values relate to rationalization of behavior. When these two key factors of action and rationalization are out of harmony, a person may verbally subscribe to a value but violate it in action.
A value is anything which persons actually approve, desire, affirm or exert themselves to obtain, preserve or assist.	An environmental aesthetic ethic must provide for long-range well-being of the environment.	The structure and configuration of a community is related to the way its inhabitants consider and treat it.
Values are intangibles. They are things of the mind that have to do with ethics and morals and other aspects of human well-being.	All significant human achievement is the product of vision by an ideal.	Man has moral responsibility for his environmental decisions.
The possession of diverse values tends to set people apart and the holding of similar values helps to bring them together.	In many primitive cultures, the surrounding environment gave spirit and form to the creations of the people.	The cultural characteristics of a community determines its own unique design forms.
Values can change. When conditions in life are such that ethics and morals that were once appropriate and accepted are no longer effective, people become confused and a change of values occurs.	The quality of an environment is a mirror image of the culture.	Man is continually developing an ethical base for making aesthetic value judgments.
The form and structure of early cities was determined by their societies' religious beliefs and practices.		

SECTION III

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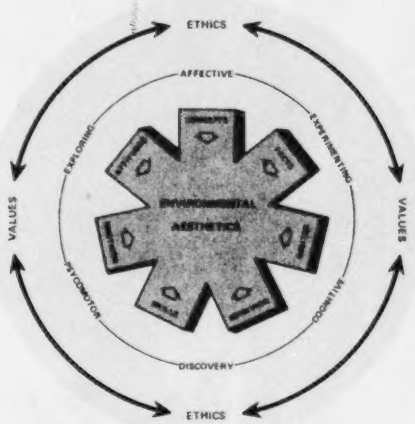

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City at Play. Hester & Associates. A series of scenes which illustrate the leisure time activities of city dwellers.

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Close-Ups. Hester & Associates. A film on the concept of distortion and redefinition of objects, by the camera moving in very tight (or "close-up") to the subject. This film gives the viewer clues to new ways of looking at common-place objects and hints of their visual richness.

Color of Things. Hester & Associates. This is not a traditional color film, as it ignores color theory. The purpose is to expose the viewer to color as it exists around us in many objects, both man-made and natural. The intensity and value of each color is recorded by examples drawn from our environment.

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How to Look at a Ctiy. Audio-Visual Center of Indiana University, and available from N.E.T. Film Service, Indiana University, Bloomington, IN 47405. One of the eight-part "Metropolis, Creator or Destroyer?" series and an outspoken architectural evaluation of the city.

In a Junk Yard. Hester & Associates. The junk yard is the source material for a visual essay. The environment which a junk yard creates is usually a scar on the landscape and yet there is beauty in the ugliness.

The Inner City I & II. Hester & Associates. The pair of films describes the inner-core of a large city and how people live in this environment. They record every-day activities of adults and children and the visual quality of this setting.

Jefferson, The Architect. Wesley Greene, and available from International Film Bureau, 332 S. Michigan Avenue, Chicago, IL 60604. A brief look at Monticello and the architectural work there and at the University of Virginia.

Leaves and Trees. Hester & Associates. A visual statement about the aesthetic qualities of trees and leaves, the filmstrip uses sound and sight to demonstrate that trees and leaves are objects of beauty — they form compositions in line, shape, and color, changing with the seasons.

Lines. Hester & Associates. The design element of lines is illustrated in natural and man-made objects. The purpose of the film is to develop an awareness of line, not as a separate entity but as a part of many existing forms.

Media Images. Hester & Associates. Television is used as a tool for picture making. The filmstrip uses many examples to describe the visual potential of a color TV set.

The Mountains. Hester & Associates. An excursion into the foothills and mountains to reveal the natural beauty.

Moving City. Hester & Associates. An aesthetic interpretation of the city in motion, such as people walking, traffic on the move, and public transportation systems.

No Time for Ugliness. The American Institute of Architects, and available from Sterling Movies, Inc., 43 West 61st Street, New York, NY 10023. By now most everyone has probably seen this film. It has won a number of awards. Sets forth the problems inherent with nearly all of the big and some not-so-big communities.

Patterns and Shapes. Hester & Associates. Our environment, man-made and natural, has many shapes and patterns. The filmstrip shows the variations of these which exist in the world around us.

Perception: Birds. Hester & Associates. In this two part sound filmstrip, a striking series of color photographs are woven together in a new format with sound and music.

Perception: The City. Hester & Associates. By using extreme close-up photography in contrast with broad panoramas, and combining them with music and effects, the similarities and differences and the hidden beauty of the urban environment are brought to life.

Perception: The Seasons. Hester & Associates. Two part series examining the seasons, man, and his celebration of the natural and social seasons.

The Planned Town. British Information Services, available from Contemporary Films, Inc. An impressive production film based on Ebenezer Howard's "Garden Cities".

The Rain. Hester & Associates. Rain and all its different visual aspects are explored in this film. Close-ups of subtle happenings during a rainstorm and the aftermath of the storm are recorded to reveal a sensitive visual statement.

The River. Hester & Associates. A visual statement about the activities on a major river in the United States. The use of rivers have changed in the 20th Century and the film records a contemporary picture of the movement and environment a river creates.

Roofs, Tops, Steeples, and Chimneys. Hester & Associates. We usually see common objects at eye level. The filmstrip investigates the visual potential of objects by photographing roof tops, steeples, and chimneys from varying visual points of view.

Rough and Smooth. Hester & Associates. The film develops the concept of texture through illustrations extracted from natural and man-made objects. Continuing textures, from rough to smooth, are illustrated throughout, and the student should be able to gain greater visual sensitivity to this design element through viewing.

Signs and Symbols. Hester & Associates. Our environment is filled with graphic images which are both visually pleasing and polluting. Signs and symbols give order to the environment but also cause visual chaos.

Signs of the City. Hester & Associates. A film emphasizing the conglomeration of signs and symbols that create and control the city environment.

The Sky. Hester & Associates. A presentation of visually exciting forms and colors that make up the sky. The elusive shapes of the continually changing compositions are emphasized.

Snow, Sea, and Sand. Hester & Associates. The filmstrip develops a visual awareness of these environments by using the camera as a selective eye to record the combinations of line, shape, color, and form, inherent in these settings.

Suburbia. Hester & Associates. The expanding urban areas since World War II has created a new type of community: the sprawling, residential area, commonly known as suburbia. The film captures the characteristics of a typical development outside a large metropolitan area.

Times of the City. Hester & Associates. Scenes in the city at different times of the day and night.

Townscape Rediscovered. Canadian Centennial Commission, and available from Community Improvement Program Centennial Commission, 425 Gloucester Street, Ottawa 4, Ontario, Canada. The urban renewal accomplishments in a city of 60,000, Victoria, British Columbia.

Water. Hester & Associates. The aesthetic and functional properties of water are presented in a series of scenes which illustrate the impact of water on our society.

The Zoo. Hester & Associates. A trip to the zoo that gives the viewer knowledge of various animals.